



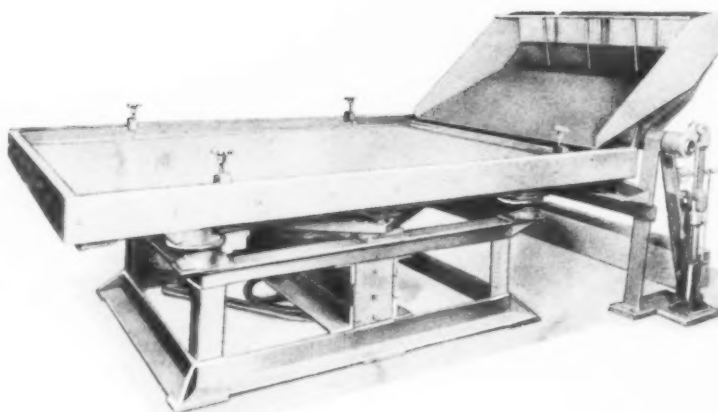
**JANUARY
1937**

**The
PHOTO-LITHOGRAPHER**

✓ APPROVED

BY THE LEADERS!

The list of CURRENT satisfied users of the ZENITH — the only gearless, single eccentric graining machine made — reads like a "Who's Who" in lithography. With one voice the leaders of the industry acclaim this peerless machine.



- Many exclusive construction features have contributed to ZENITH'S Number One position in the lithographic industry. No noisy grinding gears — a single eccentric and self-aligning ball bearing that reduces wear 80%. Hydraulic marble lift is ZENITH'S latest exclusive feature. Replaces old marble graining baskets on all ZENITH grainers.

REBUILT OFFSET PRESSES

- Zarkin Machine Company's new, up-to-date quarters are the scene of craftsmanship unmatched in the lithographic equipment industry. The same expert skill that turns out the widely heralded ZENITH grainer and whirler is also at your disposal in the rebuilding of lithographic presses. There is no compromise with quality at the home of ZENITH equipment. Visit our workshops when you are in New York.

*Literature on ZENITH equipment and
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Manufacturers of ZENITH . . The Only Gearless Single Eccentric Graining Machine

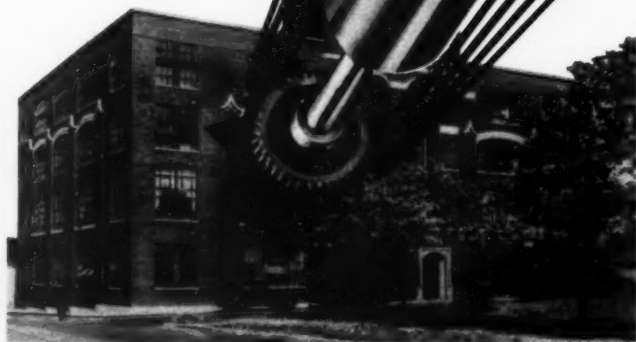
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ROLLER

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Rollers, Mercury Blankets and
other Rapid Roller Company
Products for the Graphic Arts.*



Takes the place
of Steel Vibrators.

**Eliminates Oxidation,
Ink Stripping and
Loss of Time on Press.**

**Assures Damper Flow,
Efficiency, Ink Economy
and Uniform Quality.**

RAPID ROLLER COMPANY

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STAY-FLAT SOLUTION (Clear and Matte) — a special adhesive preparation for supporting film evenly and securely on glass. The "matte" form also provides a ground-glass effect for focusing.

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IN BINGHAMTON, N. Y.**

**AGFA
REPRODUCTION
MATERIALS**



THE PHOTO-LITHOGRAPHER

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS TO INCREASE SALES EFFICIENCY AND QUALITY

EDITOR: WALTER E. SODERSTROM

Associate Editor: Irwin Robinson

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VOLUME 5, No. 1 JANUARY, 1937

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Each machine is designed to do a particular job—and offers to the progressive printer a means of meeting competition at low cost.

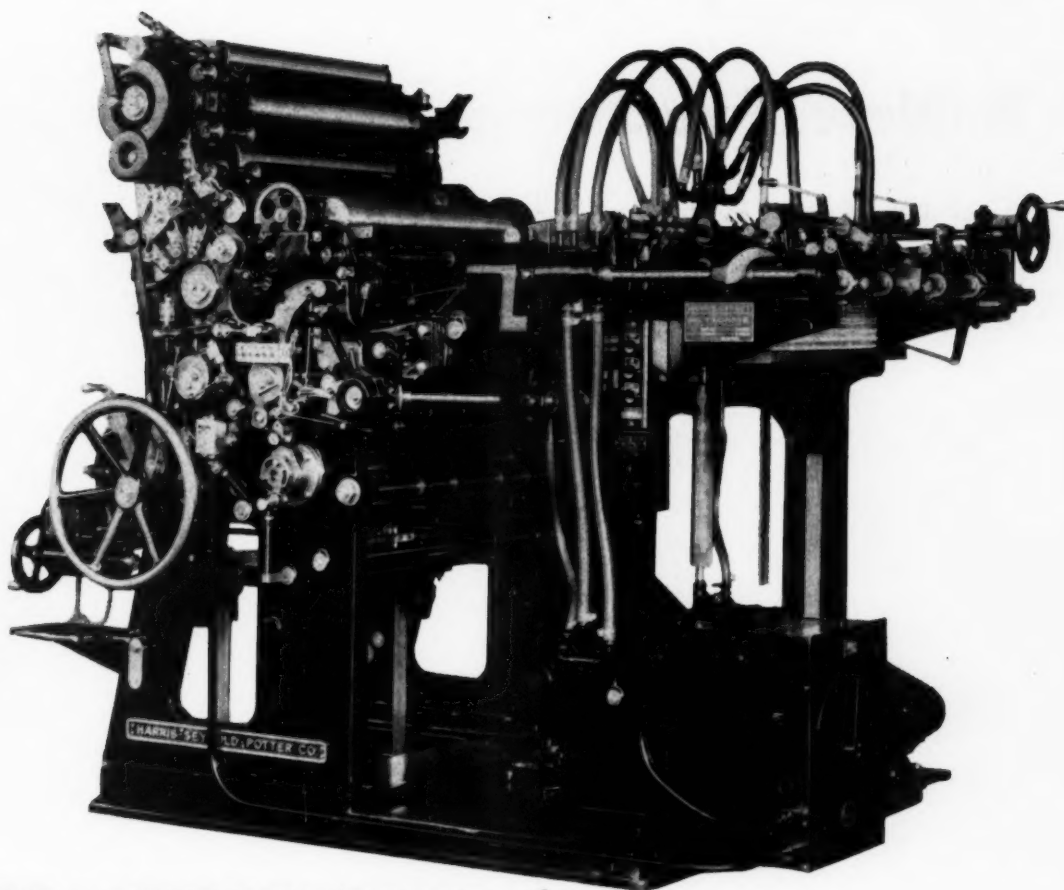
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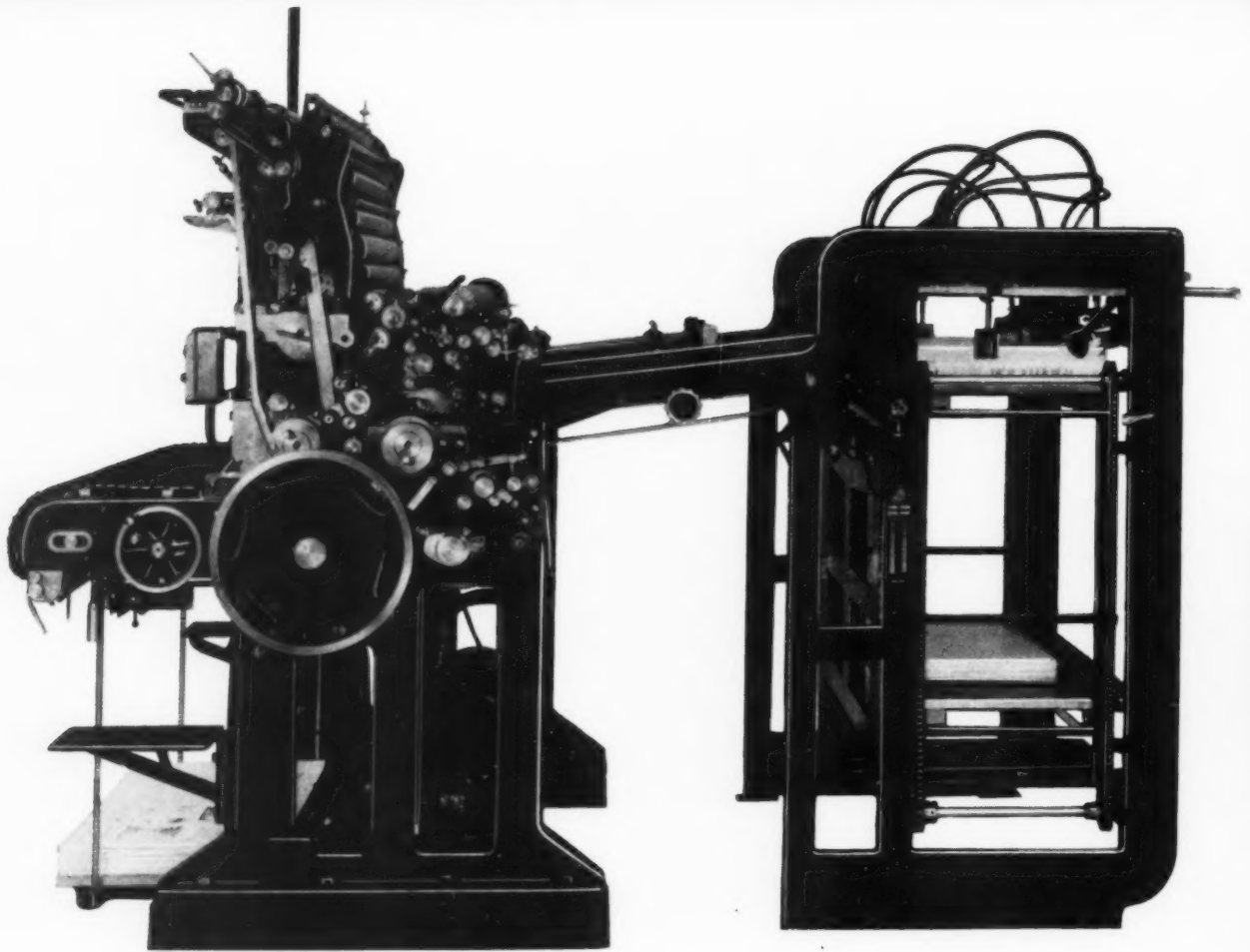
● The surge forward in all lines of trade and industry is unmistakable, and this trend will persist a long time, according to business analysts.

Printers, and others of the graphic arts, will benefit largely by this prosperity wave, especially those equipped to fill the ever growing demand for offset work. To the medium sized and smaller printer, the Harris LSB, single color, 17" x 22" serves as a special sales assistant and business expander. Its excellent design, strong construction, beautiful finish, its fine operating results, all are special Harris features. And it is priced attractively for the shop of modest means.

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BUILT-IN BALDWIN PRESS WASHER

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A PROVEN ASSET!

The first model, installed in a busy lithographic plant almost two years ago, and kept running constantly on a variety of jobs, shows no perceptible wear.

The improved design, the finest of raw materials, the precision engineering — these assure years of efficient, smooth-running operation, long after the purchase price is forgotten.

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Stream-Lined!

- High speed means more production. The WILLARD OFFSET PRESS runs efficiently at 6,000 impressions an hour; on close register, 4,500 impressions an hour.
- Over thirty percent less working parts! Yet the WILLARD is fully automatic; possesses many exclusive features that give (first) finer quality of work and (second) enable the pressman to get agoing faster and to keep agoing longer.

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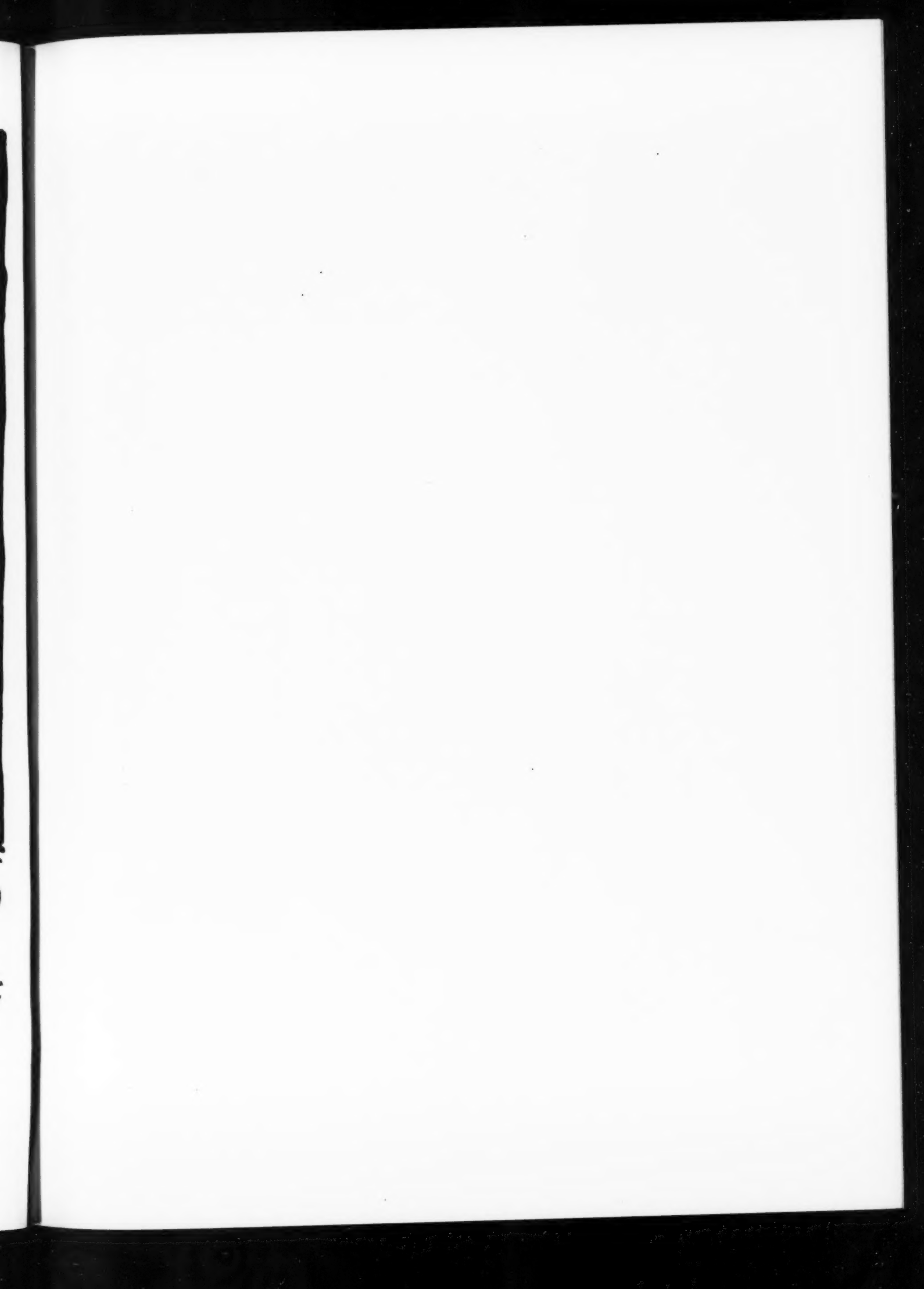
NEW YORK

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M. X. JONAS



"AND I WANT THIS MUCH WHITE SPACE BETWEEN LINES!"





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The PHOTO-LITHOGRAPHER

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS TO INCREASE SALES EFFICIENCY AND QUALITY

VOLUME 5

JANUARY, 1937

NUMBER 1

The Year 1937

THE year 1937 opens with promise of good business for the lithographic industry.

Many new plants were installed during 1935-6 and if the activity of press manufacturers means anything, then 1937 will witness a host of newcomers joining the lithographic industry.

In an industry growing as fast as this, one thing becomes increasingly evident; antiquated equipment, inferior supplies and untrained help produce a product which works irreparable injury to the lithographic industry and which cannot help but earmark the producer as unworthy of handling the better grade work.

Great strides have been taken with respect to the establishment of fair trade practices and the realization of a better relationship between employers in the industry. With a continuing and even closer cooperation those houses that produce quality work at fair prices will find their proper niche in the lithographic industry. The few who continue to chisel employees in wages and customers in quality will struggle for questionable existence.

From a general business viewpoint, one analyst declares that sales promotion by-and-large is considered the co-ordinating of advertising and selling with special emphasis on mer-

chandising. In the last five years, promotion has become a more and more important factor in business, due to the need for co-operation throughout all phases of selling toward the gaining of orders. Without doubt 1937 will bring still further strides in promotion activities.

There will be many new wrinkles in promotion work and many new angles of sales co-ordination. There will be more study in the field regarding actual sales practice and what is most effective in sales materials. There will be less theoretic desk planning of promotion helps and readier acceptance of ideas from the men in the field. There will be even greater co-operation with sales forces in the use of selling and advertising materials of all sorts, which in recent years have been recognized for their true value as order-getting devices.

Here's hoping that 1937 deals each of us our just dessert!

Estimating Series

Another job with specifications and the estimate worked out will be sent to the members of the National Association of Photo-Lithographers shortly. The many letters which have come in from the membership indicate a very wide interest in this estimating series.

Suggestions have been made that the estimates be worked out in fur-

ther detail so as to show the hours consumed in various work operations and press work devoted in the make-ready, color registration and running. This will be carried out in future estimates.

The series of estimates is being sent the membership simply as an educational activity, and those firms who are returning their own estimate worked out based on the specifications on the job submitted give evidence of the value placed on proper costing in the industry.

The Poster Opposite

THE attractive poster reproduced opposite this page is an offset job in four colors, reproduced by deep etch plates from dot etch positives, from a water color print by Lemuel Thomas. The photo-lithographic work was produced by Standard Engraving Company, Washington, D. C. with plates made by Webb & Borselski - Norris Peters, Inc., both of Washington, D. C.

The entire job was donated to the District of Columbia Society for the Prevention of Blindness.

Sales Strategy Through Demonstration

By William Wolfson

In a dimly illuminated room, Kaiser Wilhelm of Germany sat and exulted as a savant who remained standing before him reported on successful attainment in reclamation of maimed soldiers. The sagged shoulders of the ruler straightened in hope as the man of science explained unbelievable miracles: how the blind could be equipped with photo-cell eyes that saw telescopically and microscopically; how superior mechanical limbs supplanted arms and legs of flesh; how, unless hit in a vital spot, even such resurrected veterans could be put quickly again into service by affixing new parts for those damaged!

As the Kaiser absorbed the possibilities, he gloated. "And the hospitals are full, crammed full of wounded," he whispered.

Then the Kaiser abruptly put aside desires and longings. "DEMONSTRATE!" he commanded harshly.

And . . . but that is all I need tell here of a vaudeville sketch that was billed during the World War, to dramatically drive home a point, to bring to your attention a word well worth remembering and incorporating in all of your promotional activities.

DEMONSTRATE is a key word for you. An easy one to tuck into the files of your mind and to draw out for use on many occasions.

DEMONSTRATE (Latin, *demonstrare*, to show) is thus defined in Webster's unabridged:

1. To point out; portray; exhibit.
2. To show, to make evident, by reasoning or proof; to establish beyond possibility of doubt.
3. To manifest; show; as to demonstrate valor.
4. To exhibit by way of proof of example as (a) to illustrate by specimens, experiments, or operations, as in teaching; as to demonstrate anatomy. (b) to show publicly the special value or merits of

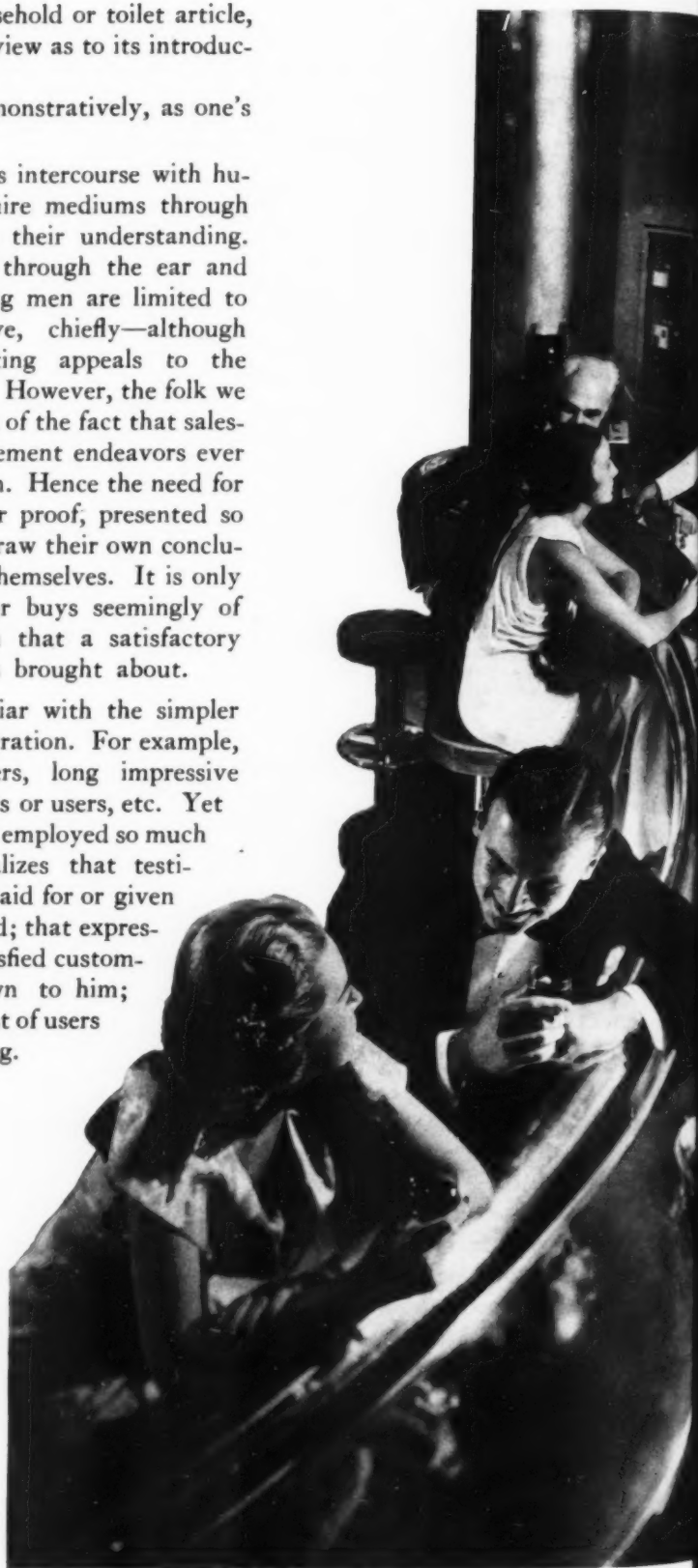
(a food, household or toilet article, etc.) with a view as to its introduction or sale.

5. To show demonstratively, as one's feelings.

In all business intercourse with humanity we require mediums through which to reach their understanding. Salesmen work through the ear and eye. Advertising men are limited to the optic nerve, chiefly—although radio broadcasting appeals to the auditory nerve. However, the folk we aim at are aware of the fact that salesman or advertisement endeavors ever to influence them. Hence the need for demonstration or proof, presented so that they may draw their own conclusions—and sell themselves. It is only when a customer buys seemingly of his own volition that a satisfactory consummation is brought about.

You are familiar with the simpler forms of demonstration. For example, testimonial letters, long impressive lists of purchasers or users, etc. Yet because these are employed so much the prospect realizes that testimonials may be paid for or given freely when urged; that expressions from dissatisfied customers are not shown to him; and that a long list of users may be misleading.

Aboard the Italia
Photo by Leigh Lucas
Courtesy
Wendell P. Colton



To properly demonstrate is to take a short-cut to conviction in your prospect. The salesman of a new printing press could show pictures of the machine, explain its mechanism, talk about it for hours at a time—but *he can come closer to a sale by showing the possible purchaser the press in operation.* If the press is on the premises of a satisfied buyer, the salesman scores further.

The salesman could dwell at length on how rigid is the construction which eliminates wearing vibration—but *he could effectively prove the absence of vibration by standing a pencil, end up, on a strategic part of the press while it ran at high speed.*

A maker of roofing material succeeded in demonstrating to dealers who claimed the product was too high priced to meet competition that it *was* a ready seller. When dealers sold a property owner the roofing material, the manufacturer made out a guarantee-bond to the buyer. Since each of these guaranty-bonds represented a sale, he had each of these bonds reproduced in a quantity sufficient to cover the doubting dealers; and he kept on mailing such duplicates to them incessantly, thus proving other alert dealers were selling.

There is, of course, an art in properly conducting a demonstration. To demonstrate this phase of demonstrating, let me narrate the method of a salesman handling a powder fire extinguisher:

He drives up to a garage in an old car; gets out, tinkers with the motor (in reality soaking it with gas); and then he quietly approaches the garage owner and asks him to take a look at it. "Just a moment," he says, as the garage man prepares to bend over the hood. With that, he strikes a match, throws it on to the motor—and a flare of flame shoots up. Startled, the mechanic may cry out in alarm, "Man, are you crazy?"

"Oh, that's nothing, don't worry," coolly responds the salesman. "Watch!"—and he throws a handful of the pow-

der on the fire which dies out promptly. Then he goes into his dance and proceeds to stock up the garage owner with his extinguisher.

When the Libby-Owens-Ford Glass Company wanted to show the protective advantages of L-O-F Safety Glass, it invited "Lefty" Gomez, famous Yankee pitcher, to prove it. He did. Photographs showing "Lefty" pitching a baseball into the windshield of a sedan are now being used both in trade-paper and national advertising.

Copy accompanying the photographs tells how the baseball was thrown with all the steam of "Lefty's" powerful arm. The ball actually bounced back and left nothing but a cobweb of fine lines where it struck. Drawing upon the reader's imagination, the copy then suggests picturing the same baseball hitting ordinary plate glass—with razor-edged chunks of broken glass flying through the air.

A bald statement or assertion does not prove anything—it claims!

Back up statements or assertions with evidence . . . and evidence is either direct demonstration or an indication that a true demonstration was made.

For example, in a book extolling two beautiful camps, the owner does not say that the water for drinking and bathing are O.K. He proves it by publishing two reports from a chemical laboratory.

There are certain types of commodities that fall naturally into demonstrative selling. These are new devices and machines; new products; special (often patented) features embodied in common merchandise; new applications found for old products; etc. Fortunate the manufacturer or salesman of such, provided they have something that fills a need—for they actually put on a show, act a part, firmly hold the prospect's attention—and dominate the sales-interview throughout. Nevertheless, where services or intangibles or most ordinary wares are to be sold, the introduction of some kind of interesting demonstration is most helpful.

Assume you are a manufacturer of clothing and sell right to the consumer through agents. You offer a line of made-to-measure garments. As a matter of course, you provide your representatives with a batch of swatches, so customers may see and feel them and select their choice. You perhaps also furnish a style book. Shrewd agents may add to this equipment by securing testimonials from satisfied customers; they may flash duplicate orders to prove saleability; and do other things to further sales. But it is the manufacturer who ought to plan a demonstrative interview for his agents. The salient selling points are: (1) Made to the individual's measure; (2) quality; (3) long wear; (4) low price. Custom tailored clothes have or should have a sewed on label bearing customer's name and date of purchase. Every agent should have several suits made for him by the house, to be worn while selling. These suits should be kept clean and pressed. The agent, early in his solicitation, calls attention to the suit he is wearing (which should be one made a year ago or longer); asks his prospect how it looks and fits; shows the label, emphasizing long wear; and then stresses low price. Atop of this, testimonials, duplicates of orders (with repeat orders kept together), etc., can be employed. New agents cannot, of course, use the old label stunt, unless it is pre-dated—but which is "out of bounds."

Suppose you make advertising novelties or premiums that are sold the same way—through agents. Let these, for the sake of example, be pocket or purse mirrors with the customer's advertising message on back. The salesman carries a kit of samples, proof sheets of stock cuts used to illustrate the advertising copy. Here is one way of demonstrating the value of these mirrors: The agent presents his business card. He says, "Mr. Merchant, these cards of mine cost two for one cent. As soon as I leave you will undoubtedly discard it. The same thing holds true of your own business cards. But were you to give a mirror instead

—which costs about 2c. apiece—it would remain in the possession of a prospective customer until lost or broken. You never saw a mirror in a waste paper basket, torn in two on the sidewalk, or floating down the stream in a gutter," etc.

Perhaps you are too superior a person to stop and attend the street vendors. Don't be. You can learn a lot regarding demonstration by studying their stunts. For instance, what can a street seller of cheap razor blade stock demonstrate other than sliding strands of hair over an edge to prove sharpness? One enterprising chap evidently reasoned or intuitively arrived at the following logical conclusion: The Gillette Blue Blades, advertised as the best the manufacturer ever offered, were accepted by the public as those of high quality—and could the vendor drop the quality down to a level with his own wares, which he offered at very much less, he would successfully sell them. So listen as he shouts: "Gentlemen, don't be fooled. I take out of its original package a blue blade. I place it on this board. I take this knife and scrape it. Do you see? The blue comes off! Why pay a lot more for a little blue paint? Buy the blank blades. They are just as good. We don't advertise, so we can sell for little money. If you must have blue blades, paint them yourselves!"

From the foregoing incidental bits bearing on demonstration, it is not to be concluded that merely to bring in demonstrating covering one point of your sales story is always enough. At times it may be. Through this you can devise an unusual approach, perk up interest at any stage, develop a strong climax. However, every conceivable angle should be checked with the question of "How best to demonstrate this?" in mind. This admonition applies equally to advertising and to personal salesmanship.

Add as many other items as you can to the short list appended, which suggests approaches to demonstrative work outs:

1. PROOF. Orders, quantity sold,

repeats or renewals; testimonials, reports, etc. This is dictionary definition No. 1 "to point out."

2. THE SHOW IT IDEA. That is why illustrations are used in advertising—samples, illustrations and motion picture exhibits from portable outfits by salesmen. Dictionary definition No. 2.
3. THE TEST IT YOURSELF IDEA. Employed in advertisements that offer the materials needed to test; or when the salesman places something in the hands of his prospect to try or operate. This is the "teaching" and "experiments" principles of dictionary definition No. 4.
4. THE DRAMATIC DEMONSTRATION. Strikingly impressive, highly entertaining—and educational.

Why is properly planned demonstrating convincing?

Because the prospect, instead of depending on your claims alone, having to take them for granted, faces the kind of evidence that satisfactorily proves to him the existence of every thing about him—through ALL of his senses—and, so, convinces (sells) himself.

Coming...SOON

THE widespread interest shown by the entire lithographic industry in the recently announced "Photo-Lithographer's Manual" has spurred the publishers on to greater efforts in order that this comprehensive volume may soon find its way into many thousands of waiting hands.

The book—180 pages, case bound—will constitute a complete, practical treatise on all phases of the lithographic business—selling, production, estimating and management.

Reservations are now being received and orders should be sent to

The Photo-lithographer's Manual
1776 Broadway • New York, N. Y.
Copies will be four dollars each.

Editors Can Hold Down Lithographing Cost

HOUSE organs are sold on a fairly close basis and by observing the following suggestions an editor can eliminate much needless work for the lithographer and simplify operations which in turn will hold down costs.

1. Edit all copy carefully so that number of changes on proofs will be kept at a minimum.

2. Wherever possible and logical, write all headlines that are to be hand-set on sheets separate from the text matter, as both go to different departments for setting.

3. Where you have a preference as to type, consult the type specimen book, and mark the type as to size, bold or light, roman or italic, flush left, centered, or flush right.

4. Where copy is profusely edited or made complex with editing, interlineations, and deletions, it helps greatly to have it re-typed in your office. This makes "clearer sailing" for compositors and reduces chance for error.

5. Try to have all cuts on hand at same time ads (or page make-up) is desired. It is time-wasting and expensive to leave "holes" for missing material and place them in the pages later on.

6. Hold the set of white proofs on which you are marking corrections, until all members of your organization who ordinarily pass on proofs, see them. This eliminates compositors having to correct galley material several times, requires less handling, and greater accuracy, as well as less proofing.

7. Give lithographer a complete pasted-up dummy, or practically complete. Don't send pages partially dummied up, which must be spaced out to allow for the missing material. This takes as much or more time as putting in the type, causes tying up the pages oftener, more proofing, and lost motion all around.



Photo-Mechanical Developments

A review of the contributions of
Wm. C. Huebner to the art of
reproduction.

Wm. C. Huebner

BECAUSE science today is synonymous with the great laboratories that constantly turn out a stream of never-ending wonders, individual achievement has frequently been lost in the maze of industry's collective output. A quarter of a century ago the names of men, rather than organizations stood out on the panorama of scientific achievement. But the development of gigantic research undertakings has now cast a cloak of anonymity about the shoulders of the men who are doing things in a scientific way. Their achievements, rather than their names, are known to the public at large.

Many have contributed to the remarkable art and science that we today call lithography. Perhaps the patron saint of the industry is Alois Senefelder, who is credited with having conceived the idea of a chemical rather than a mechanical process. But, in a manner that is utterly different from other great industries, the day of individual enterprise is not past, insofar as lithography is concerned. Indeed, in our midst today, is an energetic figure who has contributed three score of fruitful years to the development and perfection of lithographic reproduction. And, lest the industry fall prey to the illusion that "no man is a hero to his valet," this article is intended to chronicle the achievements and perfection wrought by William C. Huebner, who is still

hard at work experimenting and perfecting so that lithography may march on.

As a prelude to recording the debt that lithography owes to William C. Huebner, let us present a quick, chronological view of the art of photo-composing, with which achievement Mr. Huebner's name is most closely lined. Buffalo, N. Y. was the birthplace of this development; 1906 the year. The first 48" x 64" stone and plate coating machine was built in 1907, the same year which saw the first 48" x 64" contact pressure photo-composer.

Photo-composed color subjects were first printed from 34" x 44" lithographic stones on a flat bed stone press in Buffalo also in 1907. The color corrections were made on positive paper photographs from which halftone negatives were made.

The first developing ink was applied successfully on 48" x 64" metal plates in the same city in 1908. And a year later the Stecher plant in Rochester successfully completed the first test run from photo-composed subjects with albumin prints made on aluminum plates on a direct rotary lithographic press. The length of the run was 24,000 sheets, at the end of which time the plate was still good.

Shifting to Chicago, we find that in 1909 the first offset four-color job was printed from aluminum plates made from color separation negatives

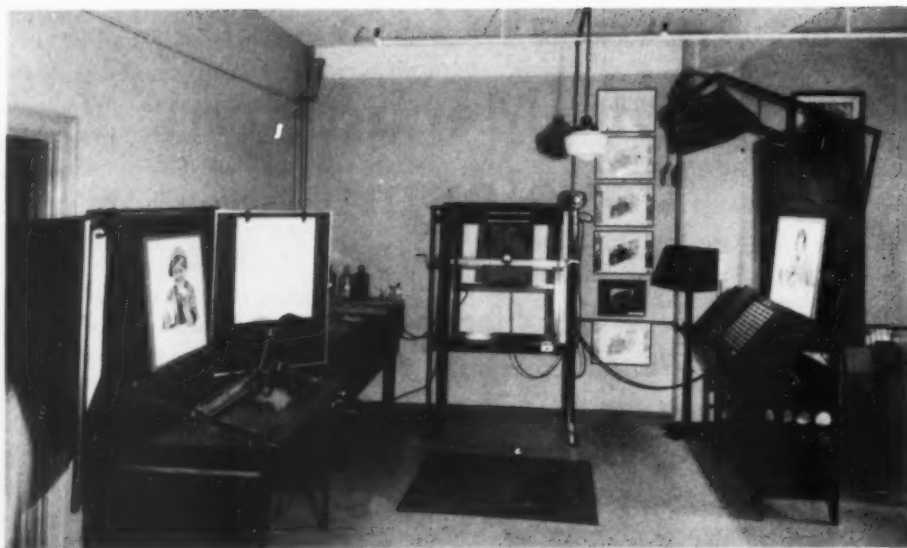
and photo-composed with albumin sensitizer on aluminum plates using developing ink, on a Harris offset press, at the Goes plant.

The first power-driven photo-composing machine arranged for direct pressure contact and also for photo-composed projected images direct on the press plate was built in Buffalo in 1909.

The name of Huebner began to feature this branch of the industry in 1910 when the Huebner-Bleistein patents Company was organized. Two important developments were recorded the same year: the first offset color work was printed from photo-composed plates made from dot etched color separation negatives in the Huebner-Bleistein Buffalo plant, and the first ground glass positive corrected color work was performed the same year.

The first offset image composing machine was built in the Huebner-Bleistein plant in Buffalo in 1912. Type forms and wood cuts were offset composed direct on metal plates and also on glass plates. These ink prints were made on sensitized surfaces and reversed, then used in photo-composing machines for making press plates from which editions were printed.

In 1912 the first All Metal Motor Focusing Camera was built in the Huebner-Bleistein plant in Buffalo. Length of rails was 24 feet. All measurements were made to .001. The same year the first poster enlarge-



Color control and measuring equipment in color department of Huebner Laboratories

ments of movie subjects were made direct to albumen sensitized aluminum plates size 48" x 64" using condensers and right angle carbons, 60 ampere special Macbeth arc lamp. Time for exposure was 35 and 40 minutes. This work was done on the All Metal Camera referred to above.

Three other developments in 1912 were:

First multiple projected images were made direct from the copy on the above All Metal Camera producing group line negatives in one operation; first vacuum negative holders applied to Photo Composing machines; and building of first predetermined image registering device for Photo Composing machines.

Successful Photo Composing machine equipment was installed in the plant of Stone Limited, Toronto, Canada, in 1912 and 1913. The original equipment is still in daily commercial operation in the plant of Rolph-Clark-Stone Limited, Toronto, Canada, producing high grade offset color work after 23 years of continuous service.

The first All Metal Overhead Motor Focusing cameras were built in Buffalo in 1920. Two of these cameras are still in daily operation in Chicago, Illinois.

In 1932, patent law suits running continuously for 12 years were completed. Validity of the Huebner pioneer patents in the Art of Photo Composing was sustained by the Courts. The same year the Lanston Monotype

Machine Company of Philadelphia, Pa. was licensed to manufacture and sell Photo Mechanical Plate Making Equipments under Huebner-Bleistein Patents Company patents, Directoplate Company patents and W. C. Huebner patents on Photo Mechanical Plate Making.

In 1933, Huebner Laboratories developed and built the first Vertical Plate Coating machine being manufactured and sold by the Lanston Monotype Machine Company. A year later the Photo Imposing System

for making offset press plates, designed at Huebner Laboratories, was offered to the trade by the Lanston Monotype Machine Company.

In 1935, Huebner Laboratories built, tested and introduced the first Colorvalhometer for measuring colors to eliminate guess work in correcting component color values. New MH Photo Composing machines, built and sold by the Lanston Monotype Machine Company on new designs, were also offered to the trade in 1935.

Last year Huebner Laboratories, completed the Color Atlas introducing color identification by numbers. The new MH All Metal Overhead Cameras built and sold by Lanston Monotype likewise were offered to the trade last year.

The importance of color control and measuring equipment is evidenced by installation of this apparatus in well known plants throughout the country. Among the plants now using the equipment are Alco Gravure Company, New York Daily News, Neo Gravure Company and Copifex Corporation of Ohio.

Elsewhere in this issue will be found a complete treatise by William C. Huebner, on the subject of precision measurement of color values.



A view of part of the modern offices of Huebner Laboratories, located at 202 E. 44th Street, New York City

Precision Measurement of Color Values

By WM. C. HUEBNER

NEWSPAPER and magazine printers, attempting to satisfy increasing demands by advertisers for color, find that color printing in the future must do far more than print colors. The demand now is made for accurate color reproduction, in the fine distinctions between the various color values in the copy. Splashes of color and mis-register of colors are no longer tolerated.

Not many years ago, two newspapers, pioneering in color advertising did rebate to complaining advertisers, sums running into hundreds of thousands of dollars, because the editions varied in color, the unsatisfactory results damaged both the color printers and the advertiser.

The problem is to duplicate in the printed advertisement as closely as possible the subtle color values of the copy.

Prevailing methods of producing color printing are fundamentally as crude today as they were thirty years ago, because we have no accurate and convenient method of measuring color values.

There is no constancy in the light-transmission capacity of two or more photographic negatives and positives used for making printing plates. Delicate variations are not detected by the eye when scanning various monotone plates and their respective color values. Tests prove that it is impossible for the human eye to measure accurately without a standard of measurement.

The color printer depends entirely on the eye of the re-toucher to measure the various values of separate color hues needed to build up the final color on the printed sheet. There is no constancy to the eye of the re-toucher from day to day and no two re-touchers see eye to eye. All are guessing at the component values of hues in colors, and the final result is not known until the last color is printed. Trial proofs, re-corrections, and make-over plates are printed before the final colors are close enough to make a satisfactory reproduction.

Obviously, the starting point in color printing is to measure the color values, to know, for any portion of the color copy, the true component parts of yellow, red, blue and black that will reproduce this color. Knowing the component parts it becomes a relatively simple matter to duplicate these values in the several plates used for color printing, and thereby duplicate in the finished product, the color values of the matter to be reproduced.

Precision measurement of color values starts with this color analysis, and for the first time, in the history of color printing, means are provided for analysing any spot of color to be reproduced, just as a chemist analyses a chemical product and determines, not only the component parts entering into this product, but also the amount of each part. This is accomplished by a color-value meter process.

The steps, methods and instruments used to analyse the color values of a copy, object, or material, to know their component parts and accurately re-construct the color with inks on the printed sheet, are about as follows:

(1) The color to be reproduced is spotted and measured for its component values.

(2) The measurements are recorded on a key chart.

An address delivered at joint session of the A. S. M. E. Graphic Arts Division and Graphic Arts Research Bureau of THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS.

(3) The values on the photographer's negative or positive plates are spotted and measured.

(4) Errors found by measurements are corrected so the values check with the measurements recorded on the key chart.

In four-color printing, starting with full strength of color in yellow, red, blue, and black inks, the printer must produce all other gradations and combinations of color.

Various processes are used in relief, gravure, and offset methods of plate making. Each has its own system of printing, each has its own range of color values, that may be obtained by a given process.

In gravure-color work, the values are produced by varying depths of the image etched below the surface of the plate and yield, correspondingly, varying densities of ink to the paper.

In relief and in offset color printing, the gradations between solid or full color and white paper or no color are obtained by varying sizes of dots, lines, or grains conveying ink densities to the paper.

In measuring color, a fixed range of value units is established by a monotone—value wedge scale, calibrated with symbols and numbers. This unit scale is used to produce a color-measure scale, which shows by its units of color and by each symbol and number, the values and hues of the component color inks in all color combinations occurring between black and white.

In addition to the monotone-value wedge scale and the color-measure scale, a light beam is focused behind a photographic plate. A photoelectric cell is placed in front of the plate, and is always in register with the light beam. A meter is connected with the cell and indicates on a calibrated scale the unit of color measured by the photoelectric cell.

These instruments can be moved over any spot on the surface of the negatives or positives and measurements can be made for check-up and corrections.

The graduated monotone value wedge scale consists of a glass plate and film carrying a photographic negative or positive image representing nine separate portions or units of value based on light transmission capacities of each unit, from the full intensity of color at one end and white or no color at the other end. The full strength or solid color is designated on the Monotone-value wedge scale by the symbol X. The nine gradations are numbered from 9 to 1, and white or no color is zero.

The meter scale is calibrated with the same symbols and numbers.

When the electric cell or electric eye is moved over unit X on the monotone-value wedge scale, no light is passed to the electric cell and the meter scale indicates X. If the cell is moved over the zero unit on the monotone-value wedge scale, then the meter scale indicates zero.

When the electric cell is moved over unit 5 on the monotone-value wedge scale, the meter-scale registers 5. The adjustment of the photoelectric cell over any unit of the monotone-value wedge scale will register the like number on the meter scale.

This coordination of value units with symbols and numbers in both scales is the basis of color-value measurement.

The monotone-value wedge scale is the unit of value for color measurement in making the color-measure scale, which pre-determines and proves the hues of the component colors and their values in all color combinations occurring between white and black.

The color-measure scale contains a total of 14,639 separate

color units (each about 1-in. square) between white or no color of the first unit and solid black produced by super-imposing full strength yellow, red, blue, and black in the last unit.

The color-measure scale indicates by symbols and numbers, the scale value of all units. Each color unit is provided with its symbol or number whereby any color is identified by the numbers of its component values and hues.

In order to reproduce the varied colors of the original by a two-, three-, or four-color system, the inks or pigments, such as yellow, red, blue, and black, must be selected for their hues and practical working capacity on the press, to yield when super-imposed on paper, as nearly as is practical, the complementary colors known as orange, green, and violet.

These inks must remain standard in quality and hues, to obtain uniform results at all times.

With standardized inks, color filters must be synchronized and standardized so the photo-color separations will represent the ink hues, which finally govern the quality of the printed reproduction of the color copy.

TECHNICAL PROCEDURE FOR MEASURING COLORS WITH THE COLORVALHUEMETER

When a color copy is to be reproduced, the standardized color filters should be used to make the color-separation negatives, for example: If the rotogravure method of printing is used to print the editions, then the Positives are to be measured and corrected to their required values as follows:

Key chart: An outline copy or a black-and-white photo of the copy is preferably made. Either of which is used to prepare what is known as a key chart.

Various portions of the original copy are selected as dominant-color areas, and are spotted or isolated from the surrounding portions of the subject, by means of a spotter or diaphragm, composed of a black paper card with an aperture approximately the same size and shape as the color unit on the color-measure scale.

When a spot on the copy is isolated by means of the spotter, the color-measure scale is used to find the same shade or color. Another spotter is now used to isolate the exact shade or color from its neighbors on the scale. The symbol or numbers of combinations selected is written on the margin of the key chart, and connected by a lead line to the area thereof corresponding to the selected color area or spot on the original copy.

The color-measure scale is conveniently indexed, so the needed spot can be found quickly.

For example: If the unit of value on the color-measure scale is designated 5471, then this number is placed on the key chart; similarly, another area may be designated 5 x 34, this number is placed on the key chart. Numbers are always put down on the key chart in the order shown under each unit in the color-measure scale, thus: the first number always represents yellow, the second, red, the third, blue, and the fourth black.

When all the desired spots are designated by numbers on the key chart, the separation positive of the yellow color, as well as the key chart, is placed on the supports of the colorvalhuemeter.

The spot on the positive to be measured as indicated by the lead line on the key chart is now covered by the electric cell. Simple controls for easy adjustments are provided. The light beam is switched on and the meter-scale indicates the number of the value on the illuminated spot. If the spot-value number registers with the first number on the key chart, no correction is needed. Otherwise the spot is corrected, i.e., lightened or strengthened until the meter-scale number tallies with the number on the key chart. These operations are repeated, until all of the spots have been measured and corrected to the first numbers of those designated by the key chart.

When the red positive is measured and corrected, the second number in the group designated, is followed. On the blue posi-

tive, the third number, and on the black positive, the fourth number is followed.

When the four plates have been measured and corrected according to the key chart, and the colorvalhuemeter, the positives can be finished as to the other areas, in their comparative values without going into detail with further measurements.

Heretofore, when two or more color subjects were to be printed at the same time, no two operators corrected the values on their respective color plates in the same key. The half values, as well as other values, would not tally, and uniformity of the several subjects etched in the same cylinder was about impossible.

Obviously, by measuring color values with the colorvalhuemeter, uniformity of like values, in two or more separate subjects, can be obtained exactly, and uniformity on the same cylinder is maintained.

An important fact should be remembered—it is difficult for the same photo operator to produce all negatives or positives with the same density in development. A slight variation in exposure time, a change in the line voltage feeding the arc lights, a change in the developer, etc., any or all, are factors that affect the comparative densities of negatives or positives.

Measurement of light-transmission capacity of the various plates make uniform control highly practical. Uncertainty, unknown factors, and guesswork are replaced with exact scientific procedure by this precision measurement of color values.

TECHNICAL PROCEDURE FOR MEASURING DOT SIZES WITH THE DOTVALHUESCOPE

The measurement of dot or grain sizes on positives used for deep-etch offset plates or dot sizes on photoengraved copper plates, are obtained by the dotvalhuescope.

The procedure is exactly as outlined for using the colorvalhuemeter, except that a light beam is projected through the negatives or positives carrying dot or grains, which dot or grain images are projected through an objective at the end of the dotvalhuescope, through the eyepiece and on to a matt-surface focus plate, which carries a dot-wedge value scale.

The various sizes of dots are numbered from 9 to 1, indicating the same relative value established in the monotone-value wedge scale.

With the dotvalhuescope, the exact sizes of the dots can be obtained by measurement and the press plate etched, with the assurance that the final color results will be obtained, as accurately as the dot sizes were measured to the pre-determined values needed and indicated on the key chart and color-measure scale.

A transparent microscopic scale showing divisions in thousandths of an inch, or in millimeters, can be inserted in the eyepiece of the microscope, and the dots measured by the scale without the projection attachment carrying the matt surface focus plate.

The matt surface focus-plate attachment is used to avoid the eye fatigue resulting from constant scanning of the field direct through the eyepiece.

In the dotvalhuescope, the negative or positive to be etched or corrected is preferably laid horizontally in a glass-bottom tray, where etch solutions can be applied and removed without inconvenience.

The dotvalhuescope can be moved over any portion of the negative or positive, with the light-beam device always in register with the dotvalhuescope objective.

The dotvalhuescope is so mounted that it can be tilted to about a horizontal position to clear the sides of the trays.

Other details need not be pointed out in this paper.

When measuring the dot sizes on photoengraved copper plates, the light beam is focused on the dots under the objective of the dotvalhuescope.

THE LITHOGRAPHERS UNION

THE Lithographic Industry, as defined in the code of fair competition for the Graphic Arts Industries is as follows:

No. B-1. Lithographic Printing. This Industry shall include all establishments using lithographic, planographic, or photo-lithographic processes, and those producing transfers.

No. D-2. Trade Lithographic Plate Making. This Industry shall include all establishments engaged in the production or partial production and sale to others of lithographic plates, irrespective of whether such plates are to be used for offset or straight method of lithography.

The recognition as a separate industry, thus gained under the N.R.A. by lithography, was made possible by the cooperative action of all of the lithographic organizations. Among these was the Amalgamated Lithographers of America, an organization of employees. Through its President, Andrew J. Kennedy, it took an active part in all N.R.A. hearings in behalf of a distinct identity.

During the N.R.A., an Industrial Relations Committee, composed of employers and employees was set up with good results to all concerned. The Amalgamated Lithographers of America was the employees' representative on this Board, President Kennedy heading its delegation. This Board was continued after the conclusion of the N.I.R.A.

The Amalgamated Lithographers of America is just what its name implies, viz, an amalgamation since 1915 of what was previously four separate employee organizations. The latter were, the International Union of Lithographic Workmen, composed of artists, engravers and designers; Stone and Plate Preparers' Association; International Protective Association of Lithographic Feeders of the United

MANY requests have come to this office asking for information on the Labor Union operating in the lithographic industry. So that the industry may have some data on the background and activities of the lithographic union, we publish the article herewith.

States and Canada; and the Lithographers' International Protective and Beneficial Association, consisting mainly of transferrers and pressmen. The last named Association, more popularly known by its initials as the L.I.P. and B.A., was the largest union in the newly amalgamated union and is regarded as the parent body of them all.

Through the L.I.P. and B.A., the Amalgamated Lithographers of America can trace its origin as far back as 1882. The L.I.P. and B.A. was then known as the Hudson Association and as such, was affiliated with the Knights of Labor. It became the L.I.P. and B.A. in 1886 and in 1905 was granted a charter as such by the American Federation of Labor. It is through this charter that the Amalgamated Lithographers of America is affiliated with the A. F. of L.

The L.I.P. and B.A. label, recognized by the A. F. of L., is also the label of the Amalgamated Lithographers of America.

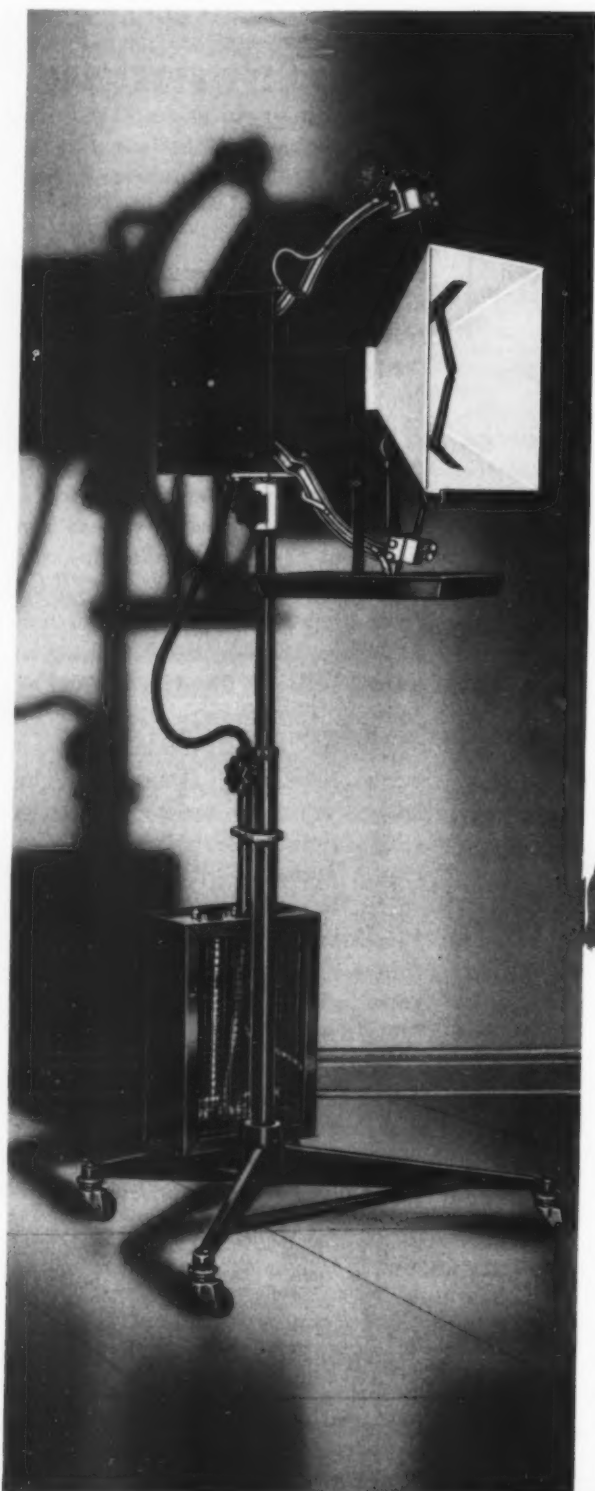
Enrolled among the Amalgamated membership are the following trades and specialties:



Artists (crayon, stipple, process, retouchers, poster), Designers, Engravers, Music Engravers, Letterers (pen, brush or machine), Litho Sign Writers, Opaquers, Tuschers, Spotters, Photographers (color separators, half-tone, line, film and paper), Photographers on Lenticular Process, Projection Machine Operators, Strippers, Negative Assemblers, Plate Makers, Provers (hand or machine offset), Transferrers (straight and original on hand or power presses), Copyists (typing composition of copy to be reproduced), Photo Composers, Vacuum Frame Operators, Sensitizers, Developers, Operators on type and lettering photo composing machines, Stone and Plate Preparers, Lithographic Press (hand, flatbed, rotary, offset, web offset and bronze presses), Lithographic Press Feeders (hand fed presses), Lithographic Operator Press Assistants (semi-automatic and automatic feeders), Brakemen, hand presses or power presses, single color or multiple color as follows: Hand Press, Flatbed Press, Rotary Press, Offset Press, Web Offset Press, Bronze Machines, Cameras, Engraving Machines, Transferring or photo composing machines, Vacuum Frames and Stone and Plate Preparing Machines.

Many of our largest photo-lithographic houses, like the National Process Co., Polygraphic Co. and others carry on agreeable relations with the Amalgamated. Its membership at present is rapidly growing. Its locals number fifty and are functioning in all of the litho centers of the United States and Canada. Andrew J. Kennedy, New York, is President; Robert Bruck, Chicago, 1st International Vice President and Acting International Secretary-Treasurer. Albert E. Castro is President of New York Local. The headquarters are at 205 West 14th Street, New York City.

HELP YOURSELF TO..

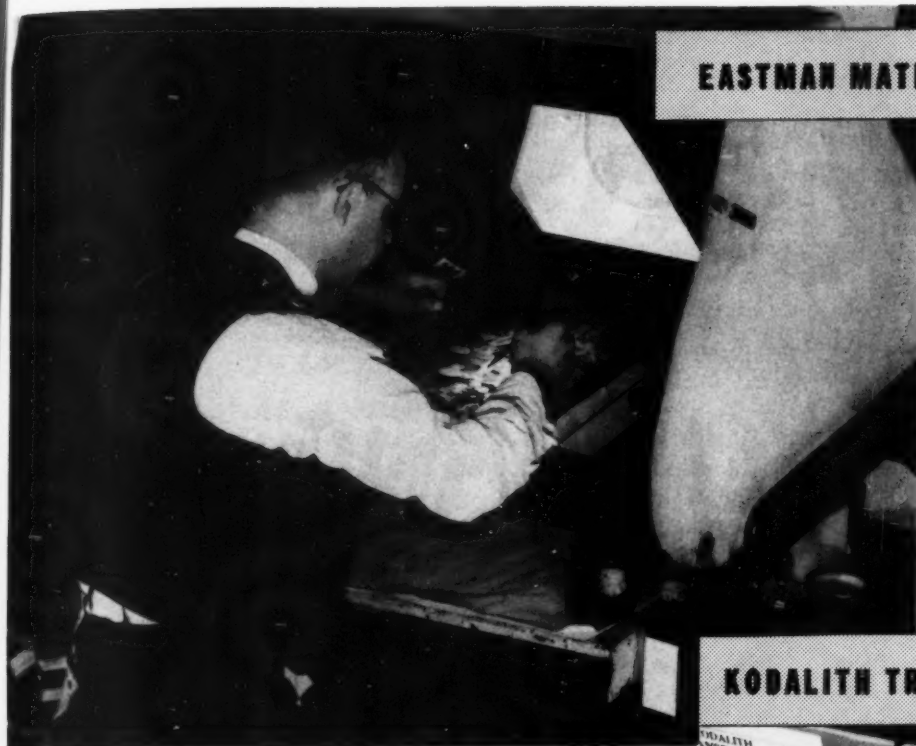


They're yours for the asking! Get your share without delay. Install new "Heli-O-Lites" now and begin to enjoy all the advantages and economy these high powered open flame arc lamps can give you.

Every day more and more Lithographers are installing "Heli-O-Lites" for what they can do—and, how well they do it. Investigate for yourself. Get full information on the complete line of "Heli-O-Lite" Open Flame Arc Lamps, available in a variety of styles and amperage capacities to accommodate every lighting requirement. Write today for complete facts and prices and copy of new general Arc Lamp Catalog.

THE C.F. PEASE COMPANY

Eastman Supplies Give Finest Results Economically...Efficiently



EASTMAN MATERIALS FOR DOT REDUCTION

EASTMAN Contrast Process Plates, Kodalith Halftone Film, and Wratten & Wainwright C.T.C. (Contrast Thin Coated) Panchromatic Plates offer you a variety of negative mediums especially adapted to dot etching. The Peridak Chemical Outfit gives you a set of standardized, proven materials that greatly facilitate the working of this important process. Investigate all of these materials, and write for the free booklet, *Halftone Dot Reduction on Eastman Dry Plates and Films*.

KODALITH ORTHOCHROMATIC PLATES

GIVE desired high contrast results...exceptional photographic values. Indispensable where absolute register or size is required. Available in standard sizes. Easily developed in standardized D-85 Package Developer. Consult your dealer.



KODALITH TRANSPARENT STRIPPING FILM



HAS all the possibilities of the wet plate in negative making. Yet it eliminates the time-wasting uncertainty of plate-pouring, and the necessity of keeping on hand a score of chemicals. In stripping, lining up, and assembling operations, exactly the same procedure is followed as with wet-plate negatives. Film can be dried before stripping when a quick photographic print is needed as proof. It can be tried in lining up and assembling operations before stripping. Because of its transparent base, it may be inspected by transmitted light during development. Lies flat on the stay-flat holder. Sheets up to 20 x 24 inches.

EASTMAN KODAK CO., *Graphic Arts Dept.,* Rochester, N. Y.

**YOU CAN
AVOID TROUBLE
BY USING**



VULCAN *Litholastic* **INKING ROLLERS •**

**WRITE
FOR BOOKLET**

*"Money Saving
Products for
Lithographers"*

... because these rollers are unaffected by oils and driers ...
free from stickiness and swelling ... durable and economical.

... because they are unaffected by temperature changes ...
thus preventing trouble from heat and humidity and costly
press delays.

... because they promote superior presswork ... have just
the right "tack" for best distribution.

... because they are backed by a satisfaction-guaranteed
policy that insures your getting good value from your
investment.

VULCAN PROOFING COMPANY

FIRST AVENUE AND 58th STREET, BROOKLYN, NEW YORK

Pacific Coast: RALPH LEBER CO., INC., 426 Polson Bldg., Seattle

Southern Representative: HI-SPEED ROLLER COMPANY, New Orleans

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JAN

ADVERTISING MEDIA FOR LITHOGRAPHERS

ALTHOUGH daily engaged in turning out printed advertising material for all manner of industries, it is often a problem for the lithographer to decide on just the type of advertising medium best suited to his own particular needs. All types of media have been used by various lithographic houses; some meeting with great success, and others falling far short of expectations.

What are some of the successful media that have been employed? Direct mail in all its phases; house organs; newspaper display and classified; periodical display; radio broadcast; billboard; car card; and advertising novelties have all been used successfully at one time or another.

Direct Mail

Consider first Direct Mail Advertising. All of us in the industry are familiar with this medium in all its manifestations. Our presses have turned out hundreds of self-mailers, envelope enclosures, folders, broadsides, booklets, and the like; and in turn we have received a welter of other pieces in every morning mail. Some of the latter we relegate to the wastebasket with scarcely a second glance; and some stay on our desks for long periods, perhaps to end up in the files attached to orders placed. Obviously it is only the latter which have been properly conceived and produced and have succeeded in fulfilling their mission.

There are definite reasons for the success of a mailing piece. First, it must have an actual message of interest to the recipient. Second, it must present this message in a concise and easily understood manner. Third, it must be attractive to the eye; so attractive, in fact, it possesses the

power to impress by appearance alone, so the prospect will lay it aside for future perusal if he happens to be too busy to investigate its claims at first inspection.

For example, let us assume that John Jones, head of a modest photo-lithographic establishment, receives two advertising folders in his morning mail. One is from the Hub-bub Fertilizer Company, and the other from the Master Layout Table Company. The Hub-bub folder consists of close-set type matter under a heading that reads, "The Best Fertilizer In the World." It outlines flowery claims for the superiority of Hub-bub Fertilizer over all other brands on the market. It has no relative illustrations. It is printed in black ink on a cheap grade of stock. The Master folder is printed in attractive colors on a good grade of stock and is carefully laid out. Its heading reads, "Master Saves You Real Money." Good half-tone illustrations of the product balance blocks of type defining its abilities and possibilities, and pointing out by actual example the reasons it will be of money-saving advantage to various industries, including photo-lithographic plants.

The Hub-bub folder goes in the waste-basket: the Master folder is read at once, or laid aside for future reference. Why? In the first place, the Hub-bub folder should never have been sent to a photo-lithographer, as his line of endeavor is not even remotely connected with fertilizer (we hope). The mailing list should be restricted to individuals who are most likely to have an active interest in the product. In the second place, extravagant and unsubstantiated claims make no impression in this sceptical

world, and verbosity is distinctly unappreciated. In the third place, color, good illustration, and balanced layout are missing in a piece which had nothing else to recommend it to our photo-lithographer, Mr. Jones. The Master folder meets all his sub-conscious requirements, and is successful in its mission of creating interest in the Master Layout Table.

Generally, the mission of a mailing piece does not go beyond the creation of active interest in a particular product. Its function should not be considered to be selling the product. If, in some cases, it brings the prospect to the point of sale with no further selling effort, so much the better; but in general it should not be condemned for failing to produce orders by return mail. Of course, some organizations, mail order houses *per se*, do not employ salesmen and conceive their mailing pieces to act as printed salesmen. Usually, however, a mailing piece should serve only as an opening wedge to create a cordial reception for a salesman who calls in person at some future date.

Rare Opportunity

In theory, lithographers should be in a position to create veritable masterpieces in the way of direct mail advertising. Not only do they have all the necessary mechanical equipment, but also they have the examples, good and bad, of all the direct mail pieces they produce for others. In the writer's opinion, however, the unfortunate fact is that many lithographers are distinctly short-sighted in the matter of their own advertising. Too many pieces have gone out from established houses which reflect credit neither on the house nor on the industry as a

Rapid Plate-Coating



QUICK..

strong and sturdy

The quality of your press-plate actually begins with the whirler or plate-coating machine.

The evenness and dependability of your coating depend just as much on the whirler as on your care in compounding your formula. Consistency . . . perfect control of speeds . . . drying facilities—all must be dependable and certain.

The Wesel Whirler has direct-connected, geared-head motor drive; no friction drive. Variable speed regulator is electrically controlled. Ball-bearing construction, using a minimum of current.

Automatic air-circulating device that does not attract dust from outside—Rustless alloy steel drum (not tin). Aluminum alloy revolving table—

Convenient drain pipe connections for ease in installation. Washing spray and also perforated pipe for cleaning housing. All pipes of solid copper.

Genuine Chromalox drying system, assuring rapid and consistent preparation at minimum cost; pilot light signal.

Adjustable legs for uneven floors to assure a level position. All controls available from one position. Lid can be raised or lowered instantly and without effort.

Can be seen in our Chicago and New York Display Rooms.

WESEL MANUFACTURING COMPANY

Factory: SCRANTON, PENNSYLVANIA

NEW YORK: 468 4th Ave. • CHICAGO: 201 N. Wells Bldg • SAN FRANCISCO: 431 Clay St.

PHOTO-COMPOSING

●Write us for information on the new Photo-Composing Machines. The entire machine is built into one integral unit: All electrical equipment, lighting system, and mechanism combined within a single machine, thus simplifying operation, control, and maintenance.

●Can be installed in a fraction of the time required by former machines.

●The outstanding feature is simplicity of operation. Control of this machine is easily learned and mastered. Made in four standard sizes.

●We manufacture a complete line of offset plate-making equipment in all standard sizes, both large and small. Write for details on cameras, vacuum printing equipment, plate-coating machines, optical and lighting equipment.



WESEL

Advertising Media for Lithographers

(Continued from page 21)

whole. A poorly done folder, falling in the hands of a person just beginning to consider lithography as a method of quality reproduction, will possibly prejudice the latter forever against the house which produced it, and the process by which it was produced.

Unless the lithographer is willing to expend the time, money, and thought necessary to produce a piece which will illustrate the best possible work obtainable by the lithographic process, it would be far better for him to skip lithographed direct mail pieces entirely as a method of house advertising. After all, a poorly lithographed folder advertising a radio brand will not condemn the entire radio industry, but such a folder advertising the process by which it was produced will be a slight on the whole lithographic fraternity.

If you have decided to send out a direct mail folder, the most important thing to consider is potential Value. Value, as has often been pointed out, is not merely Cost, but Cost considered in relation to Results. A formula to determine Value would look like this:

$$\text{Value} = \frac{\text{Results}}{\text{Cost}}$$

If you spend ten dollars on a particular bit of advertising, and a hundred dollars worth of sales can be directly or indirectly traced to it, then Value might be considered as ten. If you spend twenty dollars and three hundred return, then Value, by the same scale, is fifteen. However, there is still another factor to be considered in determining Value, and this is Volume. Ten dollars producing one hundred dollars, and one hundred dollars producing one thousand would be of the same Value rating according to the formula, but one hundred dollars spent producing one thousand dollars

worth of business would, in most cases, have a great deal more Value than ten spent producing a hundred.

First, to create Value, have a story to tell in your mailing piece. It shouldn't be sent into the world merely to beat its chest and shout, "I'm a swell guy!" Rather it should say, "I'm a swell guy, and these are the things that prove it." Braggadocio is met with disapproval, but self-confidence, backed by proof, is willingly accepted.

Second, tell the story briefly and with conviction. Use line and halftone illustrations to aid the reader to better visualize the statements made in the text.

Third, make quality and appearance paramount. A man can keep warm in a cheap, black, poorly-tailored suit, but the cheap, black, poorly-tailored suit is not going to cause him to stand out pleasingly among his fellows.

Value of Color

It is a well-substantiated fact that color adds materially to eye appeal. In an article which appeared recently in *THE PHOTO-LITHOGRAPHER* an illustration was cited of a mail-order house that wanted to test the value of color. In half the edition of its catalog certain pages were reproduced in black and white; in the other half of the edition these same pages were reproduced in color, with different key numbers for the items contained therein. In all other respects the pages were the same, and yet the color pages sold fifteen times as much of the merchandise listed as did the black and white pages. Do not, however, let your enthusiasm run away from you in the use of color. Restraint and discrimination are important. A garish advertising piece is no more attractive than a garish painting.

The importance of illustration has already been mentioned, but here again quality cannot be under-emphasized. A halftone which is not absolutely clear, sharp, and pictorially

perfect should never, under any circumstances, be used. Line drawings which do not measure up to the same specifications should also be avoided.

A well-balanced, logical layout is equally vital. Without balance, color and illustration are wasted. Remember, certain colors have more weight than others, so design your layout with this fact in mind. There is no restriction on employing the various mechanical tricks of layout such as bleeds, reverses, and the like, provided they do not violate the fundamental rules of balance, but remember that illustrations thrown helter-skelter across a page cause confusion and tend to defeat their primary purpose.

Choice of Paper

Choose a paper stock which will be in keeping with the quality of the material printed upon it. It is only natural for a person to be attracted by goods that are rich to sight and touch. Rich carpets, rich furs, and rich paper all fall in the same class. If your mailing piece is to succeed, it must reflect quality in all its components. It would be about as logical to print your high-class folder on a cheap grade of stock, as it would to put a cheap worn-out piece of carpet in your reception room.

The other day I was in the office of the production manager of a prominent advertising agency. We were speaking of a large and prosperous out-of-town lithographer. The production manager reached in the top drawer of his desk and produced four mailing pieces he had received from this lithographer over a period of time.

Truthfully, the reproduction carried every detail of line and color to be found in the original. These mailing pieces have fulfilled their mission, for they have demanded the interest, attention, and respect of the recipient, and have provided an entrée for a salesman, instead of ending their lives in the wastebasket along with the several poor pieces which I noticed there.

FOR SHARP, CLEAR REPRODUCTION

Use LITHALOID PAPER NEGATIVES



"Lithaloid was recommended so highly by everyone . . ."

writes the Welker Company of Detroit

Here is Mr. Henry A. Welker's letter relating the experience of the Welker Company, 4835 Woodward Avenue, Detroit:

"When we put in our camera, we were told to pick out a good negative material and stick to it. Your Lithaloid was recommended so highly by everyone we talked to that we first started using the paper and then your film."

"I wish to say we have never regretted our choice. We have found both dependable and uniform at all times."

Naturally, we are proud of Mr. Welker's letter—and of Lithaloid's performance.

Lithaloid quickly proves its superiority in use. Reproduces fine lines with utmost sharpness. Gives brilliant contrast—jet blacks, pure whites. Cuts down necessary opaquing time to a minimum. Good copy yields wonderful negatives; poor copy gives negative surprisingly good. Develops in 1½ to 2 minutes with standard developers. Printing is quick and easy. Orthochromatic or regular at standard prices. Let Lithaloid prove itself. Write today.

✱ We will send you this FREE trial Outfit—a difficult piece of copy and a Lithaloid negative made from it. See whether you can duplicate the results on any other paper. Postcard will bring it to you. Write today.

THE HALOID COMPANY ROCHESTER, N. Y.

Boston Office.....141 Milk St.	Philadelphia Office.....1015 Chestnut St.
Chicago Office.....608 So. Dearborn St.	Los Angeles Office.....714 So. Hill St.
Detroit Office.....149 Lafayette Blvd.	San Francisco Office.....222 Kearny St.
New York Office.....330 West 42nd St.	Canadian Distributors.....Instruments Ltd., Ottawa
Texas and Oklahoma Distributor, Jno. J. Johnson, 1912 St. Paul St.	Dallas, Texas

THE HISTORY AND DEVELOPMENT OF THE POSTER . . . PART TWO

By Jules Boday

**P.T. BARNUM'S GREATEST SHOW ON EARTH.
& THE GREAT LONDON CIRCUS COMBINED WITH**

THE GIANT AFRICAN ELEPHANT

JUMBO

JUMBO CHAINED.

JUMBO LEAVING FOR LONDON.

JUMBO ON HIS TRAVELS.

JUMBO FORCED INTO HIS BOX.

JUMBO DRAWN UP BROADWAY.

LOADING JUMBO.

THE REMOVAL OF THE BIGGEST ELEPHANT IN THE WORLD. WAS REMONSTRATED AGAINST BY THE WHOLE BRITISH NATION, & was accomplished in the face of seeming insurmountable objections. BARNUM refused to accept ONE HUNDRED THOUSAND POUNDS, as Ransome for him, but insisted the fulfillment of the Contract & Bonds.

SANGER'S ROYAL BROWN MENAGERIE & GRAND INTERNATIONAL ALLIED SHOWS.

LAST TOUR IN AMERICA. VISITS EUROPE NEXT YEAR. BARNUM, BAILEY & HUTCHINSON, SOLE OWNERS. DAILY EXPENSE \$4,000 REPRESENTING \$1,000,000

"THE public likes to be fooled," was the theme song of Barnum's publicity methods and the records show that the master showman of all time proved his point many times over. While modern advertising methods do not subscribe to his slogan of "Stretch the Truth at Any Price," there is no doubt that Barnum was the first to give pictorial outdoor advertising in the United States its place in the sun. Art critics do not think very highly of the flamboyant circus poster as a work of art, but the American public in the "wild west" days literally "ate them up."

Barnum's method of "Biggest Show on Earth" type of publicity bore fruit in the world's largest poster made for a competitor, Coles Circus, by the Strobridge Lithograph Company in the early 80's. This poster, reproduced on this page, was a 100 sheet affair and was lithographed in 4 colors. Four hundred stones were utilized. The size of this "Jumbo" poster measured 15 feet high and 100 feet long. Special boards had to be erected by a carpenter crew for each showing.

Barnum's influence was also seen in theatrical posters. The oldest pictorial posters were printed from wood blocks. Lithography, although discovered by Senefelder as early as 1796, was not used for any but small size work even 50 years later. French theatres were the first to use colored lithographed posters and Cheret always drew his animated designs directly on the stone. Even as late as 1870, there were no lithographs made larger than 28 x 44 inches. These were one color reproductions of paintings which were hand painted and sold mainly for home decoration. Practically all of the lithographic crayon work of this period was printed on hand presses. The famous Currier & Ives racing scene pictures were printed on hand presses in black ink and then hand colored. One of the earliest lithographed pictorial posters in this country was made by the Strobridge Company of Cincinnati in 1868. It is a black and tint lithograph, size 19 x 24, of the famous white horse "Excelsior." It shows this beautiful animal being put through his paces by Dan Rice, his trainer, before an audience under a tent.

The wood block method of producing posters was improving rapidly between 1870 and 1880 and some very creditable posters were turned out. One of the best firms producing pine wood posters in those early days was the Metropolitan Printing Company located in the old Herald Building at the corner of Broadway and Ann Street and owned by James Gordon Bennett. An example of a theatrical poster reproduced by Metropolitan by the wood block process, is shown opposite. It is a stock poster showing an illustration of Rip Van Winkle in the play of the same name. "Stock" posters in those days were made on speculation and sold as often as ordered, the name of the actor being imprinted in the space left for an imprint.

The real beginning of lithography on the billboards dates from the year 1880. In this year the Courier Company of Buffalo made history by producing a nine sheet lithographed poster in 4 colors showing Eliza, in a scene from "Uncle Tom's Cabin," crossing the ice with the bloodhounds snapping at her heels. In the same year, the Strobridge Lithograph Company of Cincinnati began producing posters. They secured Matt Morgan, the best lithographic stone artist of his day, together with several other poster artists and they produced many splendid posters. Forbes Lithograph Company of Boston had also been producing poster work for the "lurid" drama and lithography began to attract the attention and interest of advertisers.

What is believed to be the first 3-sheet lithographed poster produced in this country is credited to the Forbes Lithograph Company. In 1879 they conceived the idea of combining several sheets to make one complete poster. Prior to this time, posters were made in single sheet size. This first 3-sheet poster illustrated Joseph Jefferson in the rôle of "Fighting Bob." It is reproduced on the page opposite.

Probably the first "commercial" multiple lithographed poster was a 12 sheet poster advertising Ivory

The world's largest poster, reproduced below, was turned out by Strobridge Lithograph Company in the early 80's. It was a 100-sheet affair, lithographed in four colors. We are indebted to Strobridge Lithograph Company for many of the historic illustrations shown on these pages





(Left) The Rip Van Winkle poster is a typical example of the old wood-engraved "stock" poster for theatricals. (Center) The first three-sheet lithographed poster, produced by Forbes Lithograph Company in 1879, portraying Joseph Jefferson in the role of "Fighting Bob." And above, a Matt Morgan drawing for Strobridge, 1881

Soap and produced by the Strobridge Company in 1883. It is a group photograph of a foundry scene and the first composite photograph that was enlarged to poster size.

The posters of the 70's and 80's were mostly for the circus or the burlesque show or the "lurid drama." Whether reproduced by the wood block method or by stone lithography, the number of colors used was always four: yellow, red, black and blue. Zinc plates had been used by lithographers on flat bed type presses as

Barnum put up this gigantic showing on the outskirts of London when he was touring Europe in 1896. This was one of the largest "boardings" ever erected. The center panel shows a 64-sheet poster

early as 1862. Until the invention of the rotary type press which enabled the zinc plate to be fastened to the cylinder, thereby freeing it from the buckling which occurred when the plate was laid flat upon a stone or metal surface, zinc plates were seldom used. Lithograph stones, quarried from Bavaria, were used by practically every lithographer. A lithograph stone, size 30x40, weighed on an average of 400 lbs. Stones of larger size were not used because there were no presses built to take a stone larger than 30 x 40 inches. Zinc plates started to become a serious factor in poster reproduction when the Russell & Morgan Company of Cincinnati produced most of their posters from zinc plates in 1890. The poster artists in those early days worked their de-



signs directly on the stone. Today, of course, zinc or aluminum plates are used exclusively in the production of posters.

It might be interesting at this point to describe how the famous Barnum and Bailey circus designs were made by their creator, Harry A. Ogden. This artist was one of the few illustrators of his day who saw a scene or an act or a situation in perspective, and so sketched it. Other illustrators saw the same scene or situations in the flat, as it were, and as the circuses grew into 2 ring, 3 ring and sometimes 4 rings, with their stages and platforms, and other paraphernalia, sketching in perspective was an extremely valuable quality in a design. Ogden was an unusually fast worker and a fiend for detail. He would attend a performance carrying a small pocket sketch book or pad and take a few notes. His accuracy of line in these memorandums combined with his photographic memory was such that the next day he would reproduce the entire act in his studio, perfect to the last detail. He used a soft pencil and washed in the broad shadows with Payne's gray. The necessary colors were indicated on the margins of these sketches for the lithographer to follow. Strobridge lithographed practically all the Barnum and Bailey posters. No colored sketches were used in the early days and all colors had to be indicated or marked on the margins of the black and white sketch.

The painted type of display advertisement was much faster in its development in the United States than the printed billboard poster. A few years before the Civil War, patent medicine advertisers began to paint their messages on rocks, fences, barns, and on any available structure anywhere. This was to continue unabated until the early 80's. The scandal of the country at that time was the painting of a rock at Niagara Falls by St. Jacob's Oil; this and the wilful disregard of scenery by other patent medicine advertisers was the forerunner of legislation regulating outdoor advertising.

No rock or barn was safe from the professional bill poster or painter between 1860 and 1880. If you lived in New York City or Boston or Chicago in those days, painted posters on curbstones or stenciled messages on sidewalks or printed stickers on telegraph poles or on elevated pillars would greet you at all hours of the day. Without mentioning the handbills or painted messages on the windows or doors of the merchants' stores.

One of the first pieces of property leased for billposting was the fence around the Post Office site in 1869. Kissam and Allen, a New York billposting concern, are credited with having been the first to erect their own boards. Advertisers employed individuals to paint or post their displays until about 1870 when a national painting service was formed by two outdoor men named



Truth is stranger than fiction. The upper poster was used just 58 years ago (1878). The artist little dreamed that within a man's life span boats like the Clipper Ships would span oceans on railroad schedule. The typical circus lithograph is one reason why boys ran away from home in the very romantic 80's

Bradbury and Houghteling. Right after this concern started, several others organized, among them, R. J. Gunning of Chicago in 1873, Thomas Cusak in 1875 and O. J. Gude in 1878. These companies were the leaders in the development of outdoor advertising.

The first effort to put outdoor advertising on some sort of a standard basis was made in 1891 when a group of the leading outdoor figures met and formed the first trade association. Definite procedure for the leasing of locations, the use of regulation structures, and the listing and protection of outdoor displays for the benefit of the advertiser were adopted.

Conditions prevailing in the outdoor field in the 80's and 90's when no agency, organization or association of any sort existed to regulate the industry or enforce any

standard of service or protect the advertiser, were rather loose, to say the least.

Whenever an advertising campaign on the boards was in progress in those days, the advertising agent was compelled to be on the road for the duration of the campaign, visiting cities and towns in every section of the country. He would contract with billposters for space and then it would be necessary for him to supervise everything in order to obtain even a small fraction of service. In this period there were no uniform rates, no standardization of service, no guarantee or even assurance that the advertiser would get any service for his money. The integrity of the individual plant owner was the advertiser's only protection. The plant owner of that period seemed to have just one idea in mind, to get the advertiser's money with as little in return as possible. Billboards were of all sizes and shapes, the majority of them in a deplorable state and in atrocious locations. It was bad enough for the advertiser to be compelled to put up with poor service but it was adding insult to injury when the bill poster did not live up to his contract and the advertiser found that he could do nothing about it as the billposter was financially unsound. With outdoor advertising in such a disorganized condition, the advertiser considered himself fortunate if he received but a fraction of the service to which he was rightfully entitled. And at the same time, it is a tribute to the fundamental strength of outdoor advertising as an advertising medium that it slowly but steadily overcame these early drawbacks until it has now reached its present position as one of the major advertising mediums of the country.

With the advent of the automobile at the beginning of the twentieth century, outdoor advertising grew in importance as an advertising medium for both local and national advertisers. This rolling "circulation" of thousands and then millions made it imperative for the advertiser to catch the attention of "those who read as they ride." Due mainly to the efforts of certain individuals to dignify the billboard in order to attract the better grade of advertisers, the industry in 1912 adopted several far reaching measures which were destined to raise outdoor advertising to its present high plane. First, the standard size 24 sheet poster was adopted. This measures 8 ft. 10 inches high by 19 ft. 8 inches long. Second, the adoption of a standard "AA" poster structure or "Double A" as it is called in the industry, measuring 11 feet high by 25 ft. long, faced with steel sheets and surrounded by a green frame or moulding. Also the careful and accurate matching of sheets or sections of a poster when posting; "blanking," which means the pasting of a clean, white sheet of paper along the top, bottom and sides of every poster; and keeping the structure and its surroundings clean.

Subsequently, many other refinements were added such as grading of stands according to desirability; arrangement of sites into units enabling the advertiser to get even distribution in the town or city rather than an unbalanced showing of many posters in one section and few in another section of the town; the assurance that advertisers, large or small, could buy "showings" on an equal basis with no advantage to the large advertiser over the small in buying a better showing of the same size.

With such self-imposed restrictions, outdoor advertising grew by leaps and bounds and has brought about a big change in the public's attitude toward the poster and painted board. You seldom hear any agitation against the billboard today due to the high standard of practices adopted by the industry and rigidly enforced.

In 1925, the Outdoor Advertising Association of America, Inc., a consolidation of the Poster Advertising Association and the Painted Outdoor Advertising Association, was formed, which includes in its membership Poster Advertising and Painted Display Advertising plants in practically every city and town in the United States. This makes available a uniform service with national coverage.

Members of the Outdoor Advertising Association control plants in about 15,115 cities and towns in the United States and have invested between one hundred and fifty and two hundred million dollars. The growth in the volume of outdoor advertising in this country in dollars and cents is as follows:

1900—\$2,000,000; 1912—\$4,000,000; 1917—\$15,000,000; 1921—\$35,000,000; 1924—\$50,000,000; 1925—\$60,000,000; 1926—\$75,000,000; 1927—\$85,000,000; 1928—\$90,000,000.

The fastest growth was from 1917 onward. The chief reasons being, first, that in 1917 all of the betterments launched in 1912 became available for advertisers who quickly availed themselves of this medium for use on a nation-wide basis. Second, and probably more important, the World War showed what the poster could do to influence people. Before we entered the war, posters were freely used to urge preparedness. During the war posters were used for the raising of men or money and after the Armistice, they were used to put the Victory Loan over the top.

The poster, as an advertising medium, proved such a tremendous success during the war period that advertisers realized fully for the first time what a powerful medium outdoor advertising could be. Another important factor to the impetus received by outdoor advertising during the war period was the calibre of artists who contributed their efforts to poster design. Under the leadership of Charles Dana Gibson, an association of nationally known artists was formed in

Yesterday and Today



The GREATEST MOTHER in the WORLD

During the World War this poster was acclaimed the most successful and popular Red Cross effort . . .

April, 1917. They volunteered their services to the government, were accepted and the group became known officially as the "Division of Pictorial Publicity" and unofficially as "Gibson's Committee." This group, some of whose names are listed below, produced more than 700 posters during the period of the war. Some of the members were:

Cass Gilbert, Joseph Pennell, Herbert Paus, Herbert Adams, Edwin Bashfield, C. B. Falls, Adolph Treidler, C. D. Williams, F. D. Casey, J. C. Leyendecker, Tony Sarg, Howard Chandler Christy, James Montgomery Flagg, Haskell Coffin, Neysa McMein, Clarence Underwood, Alfred Orr, A. E. Foringer, Harrison Fisher and practically every other famous artist in America.

The place of the poster in the war can best be summed up perhaps by what C. Matlack Price, famous poster authority, wrote in the New York Sun, issue of August 25, 1918.

"War, destroyer of many things, has brought the poster into its own, has made the poster fulfill its greatest destiny. Enthusiasts of the old days of the poster, about the time of the World's Fair at Chicago, could never have foreseen that their favorite form of art, even then a very ephemeral by-product of the studios, would come to hold, as it does today, the forefront of the stage.

"Certainly we have proof for all time that art is capable of rising to the world-wide call to arms, that art

Les milicies us necessiten!



(Photo from Wide World)

. . . Posters still sound the call to arms. Here is one photographed a few weeks ago during Spain's civil war

is more than a pleasant incident in life, a non-essential form of aesthetic and intellectual entertainment.

"And the poster, so long thoughtlessly dismissed as ranging in value from the amusing product of an artist's idle hours to a mere advertisement," now stands before us as a more forceful aid to nation-wide publicity than any other means employed by the Government or by any war activity to reach all the people, every day, everywhere.

"The call to Arms was sounded by recruiting posters; food conservation was put constantly before the nation; the loans were proclaimed and stimulated; the Red Cross set forth its vast and merciful mission—the poster came triumphantly into its own, to perform its daily, its hourly service toward winning the war."

The Red Cross was to many artists the medium for their greatest poster efforts. The most successful and popular Red Cross poster is acclaimed to be "The Greatest Mother in the World" by A. E. Foringer. Another famous Red Cross poster was a painting by Harrison Fisher, depicting the Red Cross Madonna with one arm outstretched appealing for aid. This poster, without a caption, dramatically and forcefully portrayed the appeal which words alone could not express.

Next month Mr. Boday will continue this series of articles on the poster by delving into the production problems that mark today's use of poster advertising

ETCH PROCESS

IT COSTS from a few cents to a few dollars to make a Pitman-Efha Deep Etch Plate.

IT SAVES many dollars by yielding very long press runs, by permitting the use of fewer colors, by decreasing press stops.

IT MAKES BUSINESS for the lithographer by improving the quality of his product without adding appreciably to his costs.

IT IS BACKED by the experience gained from years of satisfactory operation in a long list of shops — on all types of offset work

IN YOUR SHOP a demonstration is yours when you say the word.

**HAROLD M. PITMAN CO.**

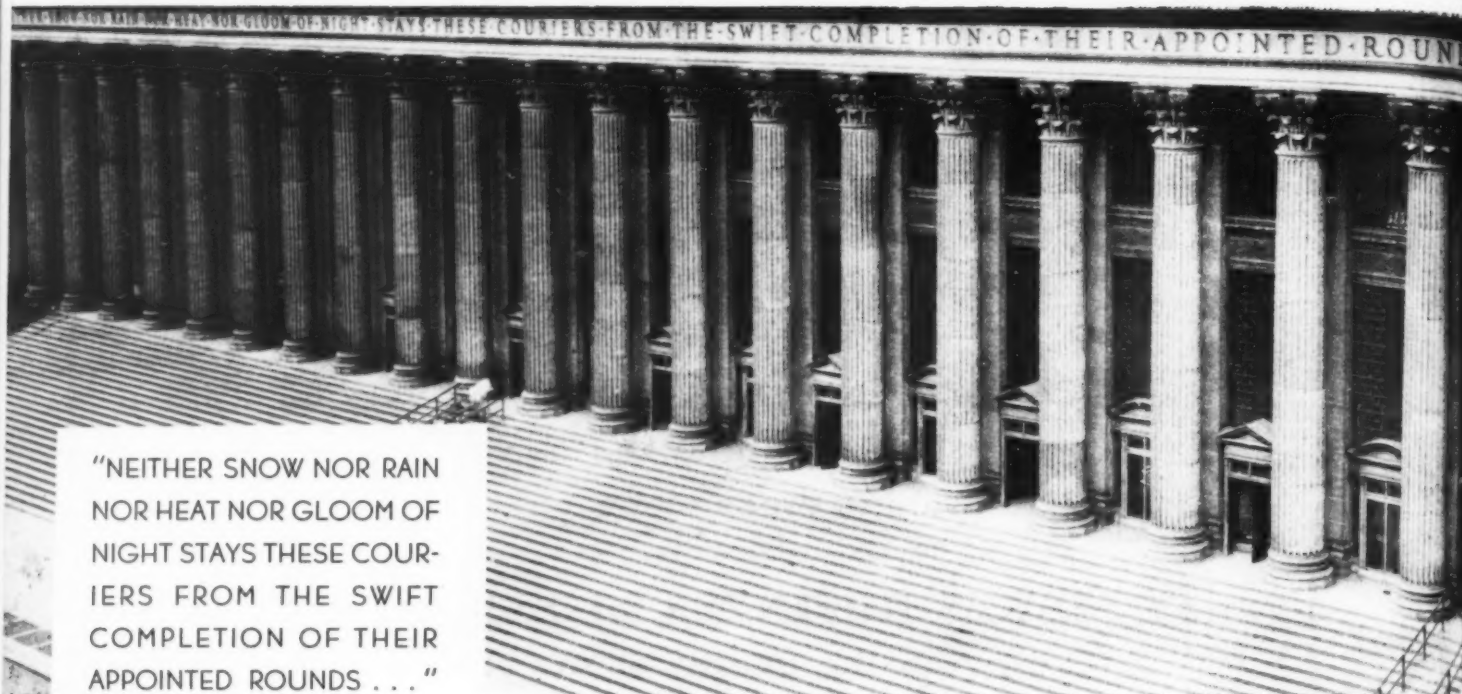
LITHOGRAPHIC EQUIPMENT & SUPPLY DIVISION

JERSEY CITY, NEW JERSEY
150 Bay Street

CHICAGO, ILLINOIS
51st Avenue and 33rd Street

Pacific Coast Representative: G. GENNERT, Inc., 1153 Wall Street, Los Angeles, California

POSTHASTE



"NEITHER SNOW NOR RAIN
NOR HEAT NOR GLOOM OF NIGHT STAYS THESE COUR-
IERS FROM THE SWIFT
COMPLETION OF THEIR
APPOINTED ROUNDS . . ."

"HEY, Bill—Here's one you'll have to step on—Jones wants 25,000 of these in the mail by next Thursday."

Whether your name is Bill or John or Pete—or the pet account is Jones or Smith or Brown—when you get your order from the account exec you're off. Off to get the job done—and the devil take the hindmost.

So you plan the production elements and the job goes into the works. You tell your printer or lithographer: "This thing must be delivered Wednesday, or else." Comes the deadline, the job's delivered—it looks good, too—and everybody's happy, until some up and coming youngster discovers that it's a 20-page booklet, and Jones could have saved one-third of the postage if it had been a 24-page book.

Then the fun really starts. Jones (himself) hits the roof—and your big boss goes up to meet him—and on the way down meets the account executive who also journeys ceiling-ward—and you be-

ing the last in line are invited up—and having no one for company your stay is a long and dreary one.

I'd venture to say that there are more 16 and 20 page booklets and catalogs turned out every year than any other kind. I'll venture further and say that if they were all increased to 24 pages (you only have to have 22 printed) the increased cost of printing and paper would be more than covered by a sizable saving in postage.

Therefore, Rule No. 1 for production men: The postage rate for books of 24 or more pages (22 or which must be printed) is one cent for each two ounces without a permit, or eight cents per pound if mailed under Sec. 562 P. L. & R. (Bulk Mailing). If less than 24 pages the postage rate is one and one-half cents for each two ounces without a permit, or 12 cents a pound if mailed under Sec. 562 P. L. & R. *The saving is only 50%.*

If this were play acting the curtain would now be lowered to allow several weeks to elapse. But because it's real drama Jones is back the next day with

another job—this time his nephew (or niece) has designed it—and it has folds to end all folding. Naturally it will have to be hand done—but Jones has O.K.'d that—and it's a self-mailer so you're to use a bright red seal and mail it under a permit for one cent each.

Again you pick the paper, the type, the ink and turn it over to the printer, or offset house, and tell them to go to it. This time, in honor of the inventive genius of his own family, Jones decides to splurge—and the order is for 50,000 (with prices on reruns of 25,000).

Again the job is delivered, again it's a work of art and again there's trouble in the offing. This time they're addressed and mailed—and then comes a call from the post office.

"Your mail is being held up. It's sealed against inspection and if you want it to go out you'll have to pay first-class postage rates."

The good news finally reaches you and you trot—Well, you run—and when you arrive one of Jim Farley's finest calmly shows you how you can't possibly

By Edward M. Mayer, jr.

COMPARATIVE THIRD CLASS POSTAGE RATES

Figured per piece—Tabulated by $\frac{1}{8}$ oz.

Weight per Piece in Ounces	Circulars, Printed Matter, Merchandise, etc., Excepting*		*Books or Catalogs 24 pages or more		Weight per Piece in Ounces	Circulars, Printed Matter, Merchandise, etc., Excepting*		*Books or Catalogs 24 pages or more	
	Regular 3rd Class Postage Per Piece	Bulk Rate Postage Per Piece	Regular 3rd Class Postage Per Piece	Bulk Rate Postage Per Piece		Regular 3rd Class Postage Per Piece	Bulk Rate Postage Per Piece	Regular 3rd Class Postage Per Piece	Bulk Rate Postage Per Piece
$1\frac{1}{8}$ oz.	$1\frac{1}{2}$ c	1 c	1c	1 c	$4\frac{3}{4}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{3}{8}$ c
$1\frac{1}{2}$ oz.	$1\frac{1}{2}$ c	$1\frac{1}{8}$ c	1c	1 c	$4\frac{7}{8}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{4}$ c
$1\frac{3}{8}$ oz.	$1\frac{1}{2}$ c	$1\frac{1}{4}$ c	1c	1 c	5 oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{2}$ c
$1\frac{3}{4}$ oz.	$1\frac{1}{2}$ c	$1\frac{1}{4}$ c	1c	1 c					
$1\frac{7}{8}$ oz.	$1\frac{1}{2}$ c	$1\frac{1}{4}$ c	1c	1 c	$5\frac{1}{8}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{8}$ c
2 oz.	$1\frac{1}{2}$ c	$1\frac{1}{2}$ c	1c	1 c	$5\frac{1}{4}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{4}$ c
					$5\frac{3}{8}$ oz.	$4\frac{1}{2}$ c	$4\frac{1}{4}$ c	3c	$2\frac{1}{8}$ c
$2\frac{1}{8}$ oz.	3 c	$1\frac{1}{4}$ c	2c	$1\frac{1}{8}$ c	$5\frac{1}{2}$ oz.	$4\frac{1}{2}$ c	$4\frac{1}{4}$ c	3c	$2\frac{3}{4}$ c
$2\frac{1}{4}$ oz.	3 c	$1\frac{1}{4}$ c	2c	$1\frac{1}{8}$ c	$5\frac{5}{8}$ oz.	$4\frac{1}{2}$ c	$4\frac{1}{4}$ c	3c	$2\frac{1}{4}$ c
$2\frac{3}{8}$ oz.	3 c	$1\frac{1}{4}$ c	2c	$1\frac{1}{8}$ c	$5\frac{3}{4}$ oz.	$4\frac{1}{2}$ c	$4\frac{1}{4}$ c	3c	$2\frac{3}{8}$ c
$2\frac{1}{2}$ oz.	3 c	$1\frac{7}{8}$ c	2c	$1\frac{1}{4}$ c	$5\frac{7}{8}$ oz.	$4\frac{1}{2}$ c	$4\frac{1}{4}$ c	3c	$2\frac{1}{4}$ c
$2\frac{5}{8}$ oz.	3 c	$1\frac{3}{4}$ c	2c	$1\frac{1}{8}$ c	6 oz.	$4\frac{1}{2}$ c	$4\frac{1}{2}$ c	3c	3 c
$2\frac{3}{4}$ oz.	3 c	$2\frac{1}{8}$ c	2c	$1\frac{3}{8}$ c					
$2\frac{7}{8}$ oz.	3 c	$2\frac{3}{8}$ c	2c	$1\frac{1}{4}$ c	$6\frac{1}{8}$ oz.	6 c	$4\frac{1}{4}$ c	4c	$3\frac{1}{8}$ c
3 oz.	3 c	$2\frac{1}{4}$ c	2c	$1\frac{1}{2}$ c	$6\frac{1}{4}$ oz.	6 c	$4\frac{1}{4}$ c	4c	$3\frac{1}{8}$ c
					$6\frac{3}{8}$ oz.	6 c	$4\frac{1}{4}$ c	4c	$3\frac{1}{8}$ c
$3\frac{1}{8}$ oz.	3 c	$2\frac{1}{4}$ c	2c	$1\frac{1}{8}$ c	$6\frac{1}{2}$ oz.	6 c	$4\frac{7}{8}$ c	4c	$3\frac{1}{4}$ c
$3\frac{1}{4}$ oz.	3 c	$2\frac{1}{8}$ c	2c	$1\frac{5}{8}$ c	$6\frac{5}{8}$ oz.	6 c	$4\frac{3}{4}$ c	4c	$3\frac{1}{8}$ c
$3\frac{3}{8}$ oz.	3 c	$2\frac{1}{4}$ c	2c	$1\frac{1}{4}$ c	$6\frac{3}{4}$ oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{3}{8}$ c
$3\frac{1}{2}$ oz.	3 c	$2\frac{3}{8}$ c	2c	$1\frac{3}{4}$ c	$6\frac{7}{8}$ oz.	6 c	$5\frac{3}{8}$ c	4c	$3\frac{1}{4}$ c
$3\frac{5}{8}$ oz.	3 c	$2\frac{3}{8}$ c	2c	$1\frac{1}{2}$ c	7 oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{1}{2}$ c
$3\frac{3}{4}$ oz.	3 c	$2\frac{1}{8}$ c	2c	$1\frac{7}{8}$ c					
$3\frac{7}{8}$ oz.	3 c	$2\frac{3}{8}$ c	2c	$1\frac{1}{4}$ c	$7\frac{1}{8}$ oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{1}{8}$ c
4 oz.	3 c	3 c	2c	2 c	$7\frac{1}{4}$ oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{3}{8}$ c
					$7\frac{3}{8}$ oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{1}{4}$ c
$4\frac{1}{8}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{8}$ c	$7\frac{1}{2}$ oz.	6 c	$5\frac{3}{8}$ c	4c	$3\frac{3}{8}$ c
$4\frac{1}{4}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{8}$ c	$7\frac{5}{8}$ oz.	6 c	$5\frac{3}{8}$ c	4c	$3\frac{1}{4}$ c
$4\frac{3}{8}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{8}$ c	$7\frac{3}{4}$ oz.	6 c	$5\frac{1}{4}$ c	4c	$3\frac{7}{8}$ c
$4\frac{1}{2}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{4}$ c	$7\frac{7}{8}$ oz.	6 c	$5\frac{3}{8}$ c	4c	$3\frac{1}{4}$ c
$4\frac{5}{8}$ oz.	$4\frac{1}{2}$ c	$3\frac{3}{4}$ c	3c	$2\frac{1}{8}$ c	8 oz.	6 c	6 c	4c	4 c

(Note: In no case shall the minimum rate per piece be less than 1 cent)

see the entire surface (both sides) of the full sheet unless you break the seal. It's too late to do anything now except moan—but if he's feeling good this same P. O. employee will tell you that if you ever have that kind of a fold again—don't you use a seal—use a steel staple. The post office, you see, can lift out the staple and put it back again without marring a thing—but once the seal is broken—it's broken and—you pay 1st class postage.

Therefore, Rule No. 2 for production

men: Broadside must be folded so that their entire surface (both sides) may be inspected without breaking the seal. If this is impossible they may be stapled instead of sealed.

Now, then, you've been the goat twice on postage matters so you do a bit of research and find that there are permits procurable which permit you a lower postage rate. You find that Sec. 562 P. L. & R. is a friend indeed. Through its help you only pay for the exact weight

of each piece of mail. But, before you go blindly ahead mailing everything under Sec. 562 take a good look at the following chart. And remember this—in a great many cases you save so little through the use of Sec. 562 that your saving turns into an increased cost. Your mailing house may charge anywhere from \$1.50 to \$2.50 a thousand for the sorting and bundling operations necessary for permit mailing—and that amount will be more than you'll save.

HAMMERMILL OFFSET

SURFACED SIZED

A DEPENDABLE offset paper possessing a beautiful, even texture, and a brilliant white color.

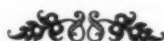
Its surface is closed, non-absorbent and free from fuzz or lint, insuring a clear sharp impression. A new development in finishing makes the paper alike on both sides, in printing qualities and appearance.

STOCKED IN ALL THE REGULAR SIZES AND WEIGHTS

SIZES	ACTUAL WEIGHTS PER 500 SHEETS				
25 x 38	60 ..	70 ..	80 ..	100 ..	120
28 x 42	74 ..	87 ..	99 ..	124 ..	149
32 x 44	89 ..	104 ..	119 ..	148 ..	178
35 x 45	99 ..	116 ..	133 ..	166 ..	199
38 x 50	120 ..	140 ..	160 ..	200 ..	240
44 x 64	.. 208 ..	238



Photo Courtesy Agfa Ansco



Please Phone Our Service
Department

CAnal 6-3600
EXTENSION 39

For Sample Book or Sheets
For Trial Purposes

Distributed by

Miller & Wright Paper Co.

200 VARICK STREET

NEW YORK, N. Y.



TO speak about the post card is to call to mind immediately a cheap little piece of manila stock that travels on its lowly way for a penny a throw. Indeed, the post card is a common synonym for insignificance—the medium, perhaps, for a hastily scrawled note, an inexpensive club notice or, for those who are so minded, the path of least resistance when you have to tell a dozen people you're "having a great time and wish you were here."

Except in the latter mentioned instance, when the face of the card probably carries a colorful scene advertising some scenic spot, one hardly thinks of the post card as an advertising medium. The fact that it is a cheap message carrier ordinarily stamps the post card as a vehicle too obvious, too homely to carry an advertising message. And yet, the very cheapness of the medium should in itself commend the post card as a live opportunity to tell a convincing sales story cheaply, quickly and effectively.

After all, here is a medium which—

when employed intelligently—has the ability to deliver a rapid, dynamic sales thrust; to convey a single impression at a glance; and, best of all, to perform a personal selling job quite unlike that of any other advertising medium.

In this discussion we are concerned with the post card as a quality advertising medium which must, ordinarily, be properly fitted into the entire sales promotion program. The post card cannot carry the entire sales responsibility by itself, any more than any other medium. It is not an advertising panacea, nor is it applicable to all products and situations. But the actual use that concerns in a great number of businesses have made of this medium indicates that it has profit possibilities that should be considered by the promotion planner.

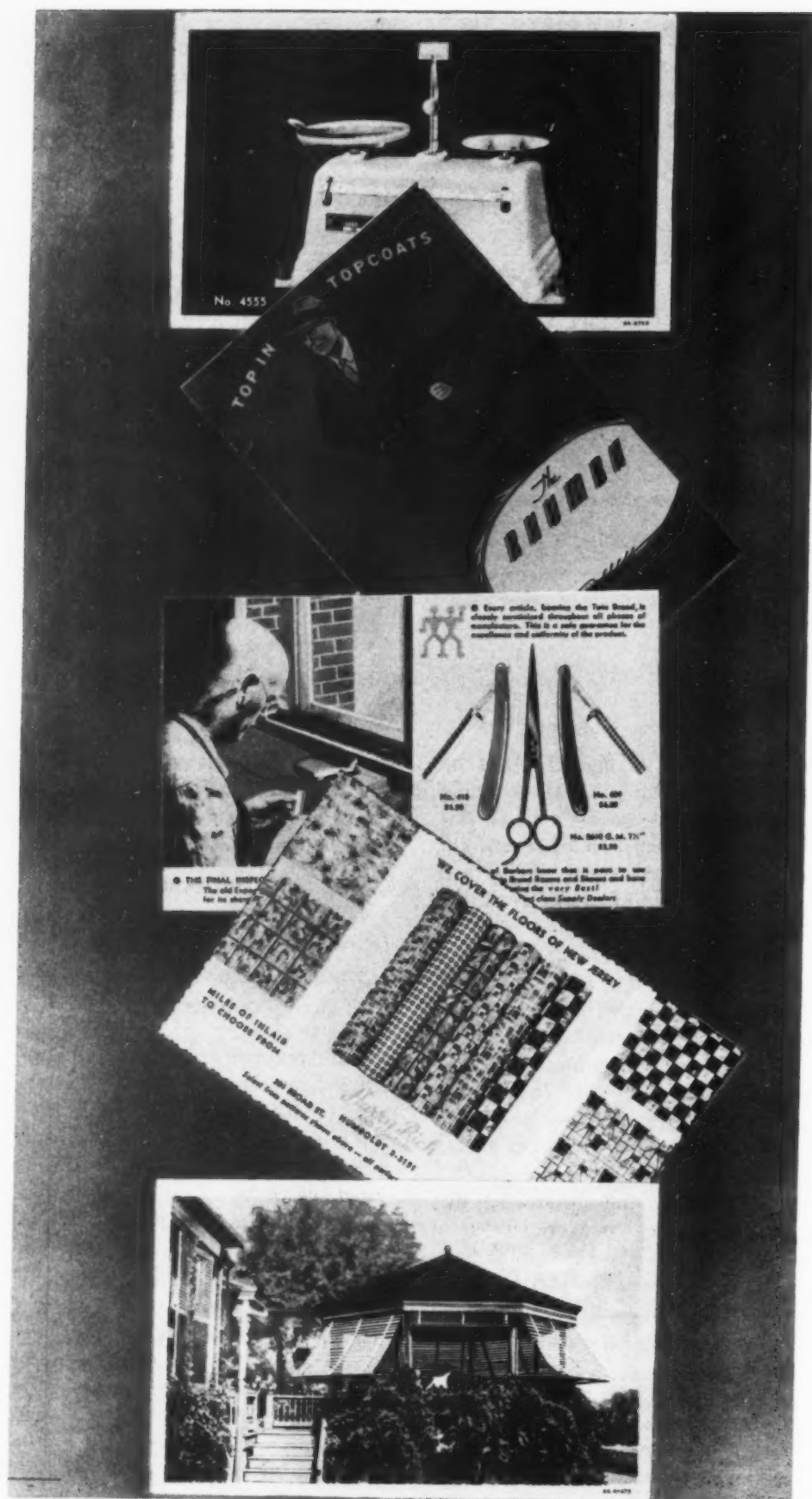
A survey of the post card as an advertising medium in ten different lines of business where it has been employed profitably reveals that all the cards possessed certain least

common denominators which, apparently were vital to the success of the promotion efforts. These common characteristics were:

1. colorful treatment
2. major stress on pictorial presentation
3. succinctness of the sales story
4. quality production of the card

The specimen insert shown opposite indicates how these four elements marked the typical three cards that are reproduced. These samples were selected at random from dozens of available cards. They tell their own sales story. Each product is different from the others.

The other ten different lines of business that were covered in this survey gave evidence of the post card's flexibility as an advertising medium, for during the course of the study numerous applications were revealed. A brief summary of the different businesses and their uses of post card advertising follows:



1. *Retail Fruiterer:* This old-line, quality organization, portrayed a basket of fruit in natural color to tie up with its delivery service everywhere for steamer, train, air travel, birthday, convalescence and hospital purposes. Direct business solicitation.

2. *Shoe Manufacturer:* Actual shoe merchandise reproduced together with brief descriptions and prices of six different styles. Provision made for dealer imprint. Purchased by manufacturer in large quantities and made available to dealers as a sales aid.

3. *Cutlery Manufacturer:* Three products illustrated together with prices on one-half of face of card. Other half devoted to picture of an old expert at work. Used to accentuate the background, quality and perfection of the product. One half of address side of card carries additional items and prices.

4. *Men's Clothing Manufacturer:* A series of cards featuring different styles of coats. One illustration, full length, on each card. Price is dominant factor. Brief description of the coat's construction features on address side of card, with provision for dealer imprint.

5. *Floor Covering Retailer:* Attractive linoleum samples shown in full color. Ten different patterns are reproduced on the face of card.

6. *Awning Blinds Manufacturer:* Face of card looks very much like usual souvenir post card, portraying the manufacturer's product in actual use. Copy is limited to address side of card, with only brief mention made of product's features.

7. *Manufacturer of Infant's Novelties:* Colorful splurge on face of card shows ten different kewpie dolls in full array. Half of address side lists a number of different lines, together with full data on construction, prices and discounts.

8. *Manufacturer of Prescription Scales:* Face of card shows simply one model scale in color. Half of reverse side devoted to specifications and price information.

9. *Women's Wear Manufacturer:*

Two attractive, smiling damsels are shown wearing lounging robes, both in actual colors of merchandise. No copy on this card—the picture tells the entire story.

10. *Bedspring Manufacturer:* Brief sales story is printed against the manufacturer's product as a background. Inset at one corner of card shows closeup of special construction feature.

The three post card specimens reproduced opposite, as well as the ten described above, were all lithographed in five colors (yellow, red, black and two blues) from black and white photographs, line or wash drawings. Production is in fixed multiples of several press runs—6,000, 12,500, 25,000 and 50,000. All prices are based on combination sheet runs and decrease in cost as the numerical quantity rises.

Post cards, of course, are mailable at one cent per card and travel with the same speed as first class mail. Incidentally, the one-cent rate also includes double post cards which can very effectively carry a prepaid, business reply card.

Summarizing the case of the post card as an advertising medium, it appears that here is an inexpensive, personalized vehicle that possesses the ability to carry a pictorial sales message quickly and effectively.

Every card should be designed to achieve a single specific purpose. Actual users of advertising post cards have found that the following seven sales functions can be performed by this medium:

1. Direct solicitation of orders by manufacturer, jobber or retailer.
2. Requests for salesmen to call.
3. Acknowledgment of orders.
4. Introduction of new products.
5. Advance "calling card" to precede salesman's visit.
6. Special price announcements.
7. Dealer sales aid.



THE SURVIVAL OF THE FITTEST

A Critical Appraisal of Conditions that Exist in Some Photo-Lithographic Plants

IN industry, as in society, the supreme law of nature is the governing force. "The survival of the fittest" applies equally in both cases. Lithography is no exception to this illustration.

There can be no doubt but that the lithographic industry as a whole will develop and prosper, but it is likewise evident that in this process of development, many will fall by the way. Some of the victims will be new shops opened without proper support and management—shops which should never have been opened in the first place. Others will be old established institutions—pioneers in the industry.

Failure is due to an inability to meet the demands of competition from the standpoint of quality, service, and price. Deficiency in quality and service is caused by lack of proper equipment; poorly trained shop help; or slipshod policy on the part of the management. Inability to meet competition is due partially to lack of equipment and trained help, and partially to a lack of proper understanding of market problems.

In the process of development of the industry the public attitude has undergone a change. In the early days Lithography was considered as a novelty, useful only in a limited field. The lithographs of Currier and Ives played an important part in the development of the American scene, but with the inception of halftone photography in newspaper illustration their value waned and finally died. Now, of course, the individual lithographs are of appreciable value, not commercially, but from the point of view of collectors of Americana who

realize their tremendous influence on the people of the country during the period they formed the only medium of pictorializing the news of the day. It is not with the story of Currier and Ives that we are concerned, however, but rather with the, to us, much more important story of photo-lithography.

Photo-lithography or planography (and, incidentally, there is still a great deal too much looseness regarding a name for the process) was at first considered a cheap, quick method of reproduction making up what it lacked in quality and appearance by its economy. Small runs on cheap stock were the usual thing. When one particular industry turned to photo-lithography for the reproduction of its particular product the industry made a tremendous gain. New shops came into being overnight to cash in on this industry's business. A second-hand 22 x 34" press, a rickety camera, and a makeshift plate department were all that were needed to line many pockets with respectable profits.

This condition existed for some time. Because the saving over letterpress was substantial, the photo-offset houses were able to command good prices for their work. Gradually, however, competition became keener and prices were cut repeatedly in frantic efforts to keep business or to take it away from somebody else. Another problem to cope with was the action on the part of the great letterpress houses who did not take kindly to the loss of their work. Realizing that in this field they could not compete successfully with their letterpress equipment, they decided to meet the invaders on their own ground. With

available resources they were able to install offset presses far superior to those of their competitors. Because of the wide scope of their operations they now are regaining some of the business they had lost. The small houses, getting only a small volume of business at a meager price, were forced to turn elsewhere for their revenue.

Naturally, they kept as closely as possible to the line they were experienced in; the line to which their equipment was best adapted. In consequence, the main portion of the work done by photo-lithographers consisted of reprints, reproduction of typewritten material, and the like, almost entirely in black and white. The use of a standard stock, twenty pound white sulphite, and a standard size, 8½ x 11", made the combination form and consequent low prices possible. Again the lithographers made money.

During this period, however, progressive, scientific minds were at work. Certain individuals realized the tremendous possibilities of photo-offset as a potential method of quality reproduction and devoted their efforts to the development of equipment with which to capitalize on these potentialities. Precision cameras, high-speed color presses, photo-composing machines, and what-not gradually attained a state of perfection. With the development of new machinery came great refinements in the process itself. Deep etch, dot etch, halftone staging, nickel-plated plates became familiar to the higher type of craftsmen in the

(Continued to page 48)

Where Can I Get a Good Book

ON PHOTO-LITHOGRAPHY ?

"Where can I get a good book on photo-lithography?" is a question often asked in this industry. There are few books published on photo-lithography.

Because of the vital editorial content, the educational and informational nature of each issue of THE PHOTO-LITHOGRAPHER, we have had numerous requests for complete back files of THE PHOTO-LITHOGRAPHER. Many plants find it desirable to place in the hands of a newcomer to the sales, estimating and shop force, a complete file of THE PHOTO-LITHOGRAPHER.

So that we can make available to the industry a great deal of information on photo-lithography, we are publishing THE PHOTO-LITHOGRAPHER'S MANUAL, 180 pages, 8½x11, edition binding, a text book which will contain all of the valuable sales, estimating, production and management information carried in past issues of THE PHOTO-LITHOGRAPHER. In addition, the volume will carry much other information on Ink and Paper of an educational nature.

THE PHOTO-LITHOGRAPHER'S MANUAL, now in preparation, should be ready for distribution shortly. Copies may be had for \$4.00 each, with a special rate for five or more copies.

Walter E. Soderstrom, 1776 Broadway, New York, N. Y.

Please enter our order for _____ copies of THE PHOTO-LITHOGRAPHER'S MANUAL.

We enclose herewith \$ _____. You may send the book C. O. D. or bill us \$ _____.

Discount with order 10%

Firm Name

Individual

Street Address

City

State

□ DESIGN ADVERTISING

by

A discussion on practical problems that affect today's typographic design and layout

ABSTRACT art has very little in common with advertising. If there is one thing that an advertiser must insist on it is that his illustrations tell a very definite story. The illustration should be literal and correct in every detail.

For example, a short time ago we had to prepare an advertisement for a large tire company showing a lion springing on a deer. The idea was to show the strength and springiness of the rubber. It was necessary to have the illustrator not only look up the anatomy of the lion but also to go to the museums and look up the types of foliage that grow in the country inhabited by lions:—certain types of trees; the grass in the foreground, etc. He also had to look up the geography of the country.

If we had shown the lion jumping down into a ravine it might happen that this particular kind of lion was a plains animal and couldn't possibly have found a ravine to jump into.

All of these details are very necessary and very important for this reason:—As soon as this advertisement appeared we would suddenly find that there are several hundred thousand lion experts in this country and every one would write, telephone, or telegraph in the fault in the drawing no matter how trivial. If there are so many people in the country who are lion experts you can imagine how many people there are who are self-appointed critics on a subject like golf. There is no subject that arouses such a pile of criticism as a golf picture. The way the player is standing; the position

of his head; the fingers must be just right and everything about the picture must be handled correctly or Heaven help the advertiser. The sad part of it is that the advertiser gets the telegrams and not the agency.

This would make it seem as though the whole thing were pretty well cut and dried. However, if we were to let it go at that I am convinced we have not told the complete story. If what I have said is entirely true we could very easily make definite rules; check on the clarity of our technique in illustration and the legibility of our type and have fool-proof advertising.

Advertising agencies nowadays have very wonderful research departments and tremendous investigations are taking place every day to prove everything that is provable. We once sent a research expert all the way to Europe to check up on the prune situation in the Scandinavian countries. We wanted to find out why more prunes were used there than in other parts of Europe or even in this country, and we found out. They seem to use a lot of prunes in making soup and other dishes that are not used in this country.

It would be a simple matter to have one of these great research institutes check up on just how large the illustration should be; what size to set the text in; how large the heading should be and where it should be placed. In fact, two or three variations might settle the entire advertising design problems forever and we could do without layout designers.

C. T. COINER

Art Director,
N. W. Ayer & Son, Inc.

But I am sure that such is not the case. The average reader sees too much advertising and he would soon tire of the fool-proof format. Walking along the street you see many people coming in your direction. Most of them go by unnoticed. Out of every fifty or seventy-five persons that go by you may see one person that is outstanding for some particular reason. He may be well dressed; he may be tall and attractive; he may be undersized or he may be a freak of some kind. But you notice him. It is very much the same with advertising. The commonplace format is apt to be passed by.

The freak page, screaming for attention, will get your attention but the impression will not be a good one. But an advertisement that is attractive and well arranged in a way that is not exactly like the other advertisements in a magazine, will get your attention and get it with respect. Just how far we can go with the extremes in dress will depend very often on the type of person we want to attract. If we are selling a very cheap article:— food products—cigarettes, or something of that kind, we do not aim our advertising at the wealthier person or the upper middle class but at the lower class market because there are so many more people in that class and the advertising should be very literal and very simple.

It is the layout or arrangement of the elements in an advertisement that gives us our opportunity for design. In the last few years the stereotyped layout has been dealt a staggering blow. One day someone thought of putting a photographic illustration on a slight slant in order to give the advertisement a little more of a

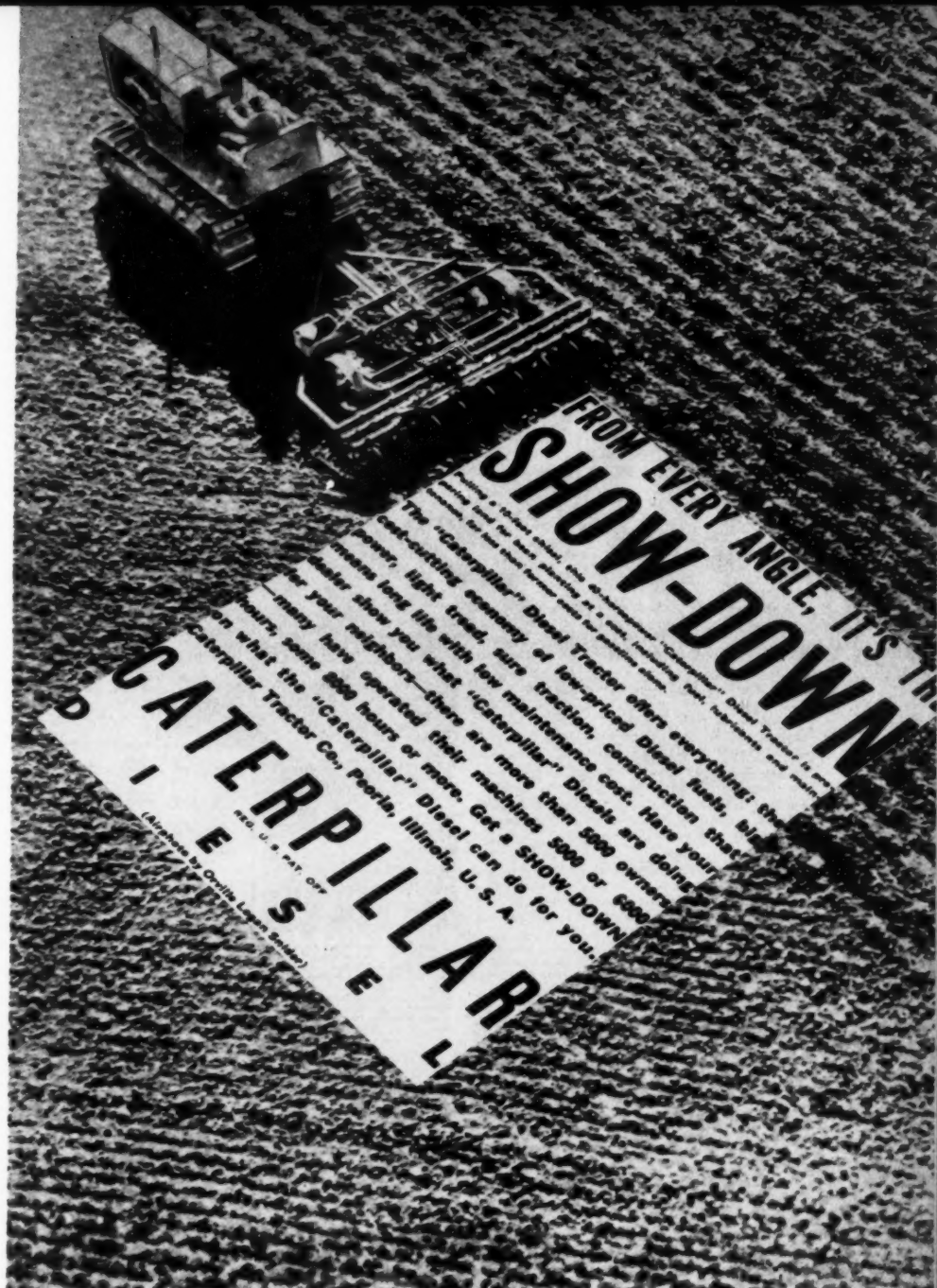
jolt. Later on someone thought of putting a name on its end running up the page instead of across. The word was so simple and bold that it was found to be quite legible. Even blocks of text were soon being put on a slant, until now it is almost impossible to make a definite rule that will hold good in advertising layout.

A rule is no sooner made than it is broken to the advantage of the advertiser. We used to think that a light delicate type or lettering appealed to women and that a heavy brutal type of layout

"... a rule is no sooner made than it is broken to the advantage of the advertiser.

"... It is the layout or arrangement of the elements in an advertisement that gives us our opportunity for design."

could only be used for heavy objects. Then Dr. Agha, art director of Conde Nast Publications, started to use Gothic type in his headings in Vogue and another rule was shattered. We can safely say that there are no rules except rules



19917-7410-1000



© The Common Standard Barber Towels are the "Three Ws." These are "Worthwhile," a night towel; "Wearable," served because it is so handy; and "Winner" (Illustration A), the most popular. "The Three Ws" are made in 16-inch or cut to any desired length. Standard size (Illustration B) shows No. 200. See *Stamps* Demand by barbers everywhere. Standard size Double Second. Highly absorbent. All colors—center in red, blue, green or orange.

of good taste. And even there we can find plenty of successful violations.

The three advertisements reproduced with this article are interesting in that they violate most of the rules of good typography and advertising and still were successful and achieved their purpose. These layouts and advertising illustrations are pointing the way towards what we may expect in the future. They show that even if we disregard the meaning of type characters or layout forms there is no reason why those forms cannot be effective and pleasing in their design. A character from the Caslon alphabet would be a pleasing abstract design even to a Chinaman, just as the Arabic characters from an Arabic newspaper are graceful and pleasant for us to look at even though we do not know their meaning. The same is true of advertising design.

"... even if we disregard the meaning of type characters or layout forms there is no reason why those forms cannot be effective and pleasing."

"... the illustrations reproduced herewith are interesting in that they violate most rules of good typography and advertising and still were successful."



CANNON TOWELS

1998年12月

type
ason
and

A LOT CAN HAPPEN IN
FIFTY THREE YEARS

SIEBOLD

are
s of
still

The world has changed so much since Siebold's was established in 1882, that none of us would know how to act if we suddenly went back to those days.

But some things never change. 53 years of experience in serving the lithographic industry have not altered our original principle of offering the highest quality and finest service to every customer.

Every ink, every lithographic product we handle is backed by our own reputation. Offset Black, which has for 30 years been regarded as more or less of a problem, is no problem to us. We will gladly have our representative call and give you full details on the various Blacks we manufacture.

Siebold's roller department is fully equipped to supply your wants such as Smooth and Grain Leather Rollers, Moleton, and Muslin Covers, also full selection of Hand Rollers, both Rubber and Leather for transferers and prover's use. These are of our own manufacture and our 53 year old reputation is back of every one.

J. H. & G. B. SIEBOLD, INC.

Lithographer's Supplies

47 WATTS STREET, NEW YORK, N. Y.

Phone WA lker 5-9474

*Supply price list and Offset
Specimen Book upon request*

OFFSET BLACKS · COLORS · SAFETY INKS · ROLLERS · MOLLETON · DAMPER COVERS · RUBBER BLANKETS

Package inserts



Package inserts vary in format, copy treatment and style, depending on the job they are to perform and the physical characteristics of the package

THE package insert is still in the early stages of its development. The familiar old stuffer which for many years has played its dual role of direction sheet and packing aid has yet to complete its gradual metamorphosis and emerge as a full-fledged advertising medium worthy of a place in the conference room. We can hasten this change if we recognize the value of the insert, and if we follow a few simple rules for its preparation.

What can the insert do for us? Briefly it can give directions for the use and care of the product with which it is packed; it can build repeat sales and

sell other products in the line; it can create good will. To accomplish these three main purposes, the insert may only say, "Thank you for trying our product," or it may be a recipe book; it may carry endorsements or it may be a certificate of guarantee; it may suggest the purchase of larger units, or merchandise a radio program; it may be a child's game or a bibliography. In short, it is a flexible medium which may be used in any one of a hundred ways to the benefit of the sender and the recipient.

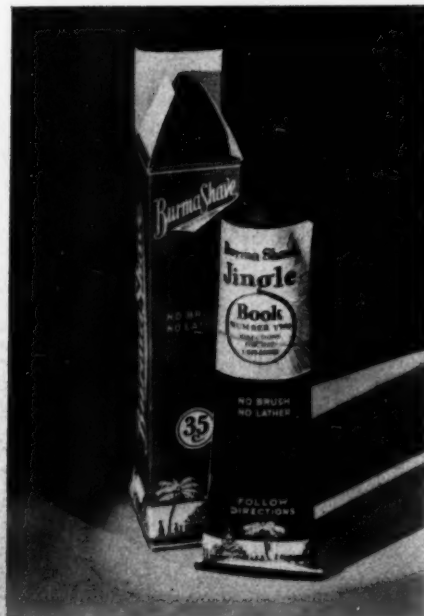
If, however, the insert is to accomplish any purpose at all, it must be so

written, designed and packed that it will be read. It is possible to cut down waste circulation to a negligible percentage if care is taken in advance.

The first step is to decide on a method of packing the insert. One which is wrapped around the sides of a jar will generally remain in the carton when the jar is withdrawn. According to a survey made by a large pharmaceutical house, fifty percent of their inserts packed in this manner were never even noticed by the consumer. The cost of changing their packaging machinery so that the insert went over the top of the jar was

WHAT THEY ARE—WHAT THEY SHOULD DO

BY COLIN CAMPBELL



clearly justified by the immediate doubling of its circulation. The problem is to place the insert in such a way that the product cannot be removed from its package without the insert being seen and handled. This is not always possible. Packaging machinery or efficiency of the hand operation as well as the limitations of the package in question must be considered. But if a way of packing the insert so that it actually reaches the consumer can be found, the trouble taken in advance will be justified. It will also prevent later complications when the insert reaches the production line.

The second step in increasing the



Above are three more package inserts that clicked. Note the attention given to the placement in each instance. The insert must be seen by the recipient



Reproduced at the left is a collection of package inserts illustrating the broad scope, format and treatment employed in this medium. Each insert is designed to perform a specific job once it reaches its recipient via a product already purchased and in use.

circulation of the insert is to concentrate its attention-compelling features, whether headline or illustration, in that area of the insert that is immediately visible when the package is opened. It does little good to have a sparkling headline hidden away behind a half dozen folds, as will often be the case if the layout is planned in the same way as a piece of direct mail. The small visible area should be effectively utilized to arouse the curiosity of the consumer so that the insert will be unfolded.

To find this area accurately, fold a dummy insert, put it in the package as it would be placed when on the production line and mark off the visible area. If the same insert, folded differ-

ently, is to be used in a package of another size, it will be necessary to repeat this process and have two areas which have attention value. It is also well to plan the layout so that the copy is not broken by folds any more than is absolutely unavoidable. These two features of correct packing and correct layout will do more than anything else to insure a reading of the package insert.

The actual writing of the copy is a difficult problem for one who has been writing straight consumer advertising. The reader of the insert is presumably one who has bought at least one package of the product. The customary copy angles are no longer necessary

because a sale has actually been made. The insert offers a splendid opportunity for the manufacturer to address each consumer in the same vein as he would address him by personal letter. This has been overlooked in too many inserts with the result that the copy is a belated and totally unnecessary sales talk. The primary purpose of the insert is not directly to solicit a sale, but rather to insure satisfaction with the purchase that has already been made. Repeat sales come only from satisfied customers. Once this has been accomplished it is possible directly or indirectly to suggest further purchases. The selling message is addressed not to a cold prospect but to a customer who should be approached as such.

It will be well at this time to consider changes of copy. We are trying to create inserts that are not mere unchanging direction sheets, but advertising messages. There is no more reason for using the same insert year in and year out than there is in running the same advertisement in a magazine month after month for years. The insert is almost invariably so small in size that a number are printed on a sheet. At a small additional cost for preparation the copy may be changed wholly or in part, and the duplication cut down to a minimum. If an average of three units a year are purchased, at least three inserts should be prepared. Of course, there is bound to be a certain amount of duplication however much care is taken, but that need not be used as an excuse for making no attempt to avoid the evil.

It will be found that the choice of a reproduction process will depend on the nature of each job, just as it does in other production work. Letterpress and lithography are most frequently used, while in several cases very large inserts carrying many illustrations have avoided the stamp of the stuffer and been made unusually attractive without raising the cost prohibitively by calling on rotogravure. So widely do package inserts vary in their specifications that there is no definite rule to be set as to the method of reproduction.

The size, too, will vary from one extreme to the other. It will depend upon the requirements of the packaging line, and upon the material it seems necessary to include. It is best, however, to hold the size down to an absolute minimum and to utilize the saving in a good paper stock, more color, effective illustration and fine reproduction. If only to carry out the good impression that modern, sanitary packaging makes, we should avoid the drab scraps of paper so often found beneath an expensive wrapper.

Color, if only a colored ink or a tinted stock, will often stay the hand that is about to throw the insert into

the waste paper basket. Appetizingly illustrated recipe folders will not only be read, but often retained over a long period. A booklet on beauty packed with a cosmetic will often stay on a woman's dressing table for a long period if the copy contains suggestions of interest and is not too obviously commercial. In any case the same care in preparation and production should be taken with the insert as is taken with the package itself.

The insert offers us an opportunity of reaching an audience made up entirely of consumers. No competitor's message intrudes to distract their attention. This is a medium as personal as direct mail sent to a selected group. Its cost is negligible in comparison with other media. Several products have been introduced to a nationwide market entirely through the use of inserts. Certain companies have found that coupon returns from inserts may be received at a fraction of the cost of the same coupons run in magazines. The insert is naturally limited to the narrow audience of consumers, but in

this selectivity of distribution lies its strength. The time and trouble spent in more careful preparation of the inserts will be repaid when its potential usefulness is revealed.

A Reader Expresses Himself

"We consider your magazine one of the finest helps to struggling photolithographers and to the process in general that has ever appeared. Your articles are most practical and educational and we wish to express our thanks for the extremely good work which you are doing for all of us.

"The papers which you now publish are very much in line with what we smaller fellows need. Of particular interest to us are articles on estimating procedure, sales ideas on new uses for the process and, we suggest, something on floor plan layouts of photo-litho shops.

"Enclosed herewith please find our check covering renewal subscription. It is a very modest consideration for all the value we receive.

—Standard Lithograph Co., Inc.
Los Angeles, Calif.

—R. H. Cabell, Jr., President.

New Yellow Ink Announced

A new yellow printing ink said to possess an unusually low specific gravity is now being produced by the E. J. Kelly Company, Manufacturers of Kalamazoo, Michigan.

It is claimed that because of its low specific gravity (1.25 to 1.4 compared to 1.5 to 2.0, as in the usual yellows) greater ink mileage is made possible. Other features of the new ink are said to be a fairly non-scratch surface and generally better workability on the press.



Another form of package insert that has worked out successfully. This unit fits over the neck of the bottle, thus assuring immediate attention.

Survival of the Fittest

(Continued from page 38)

industry. These men experimented tirelessly and new process after new process came to the point where they could be used commercially.

Alert houses, watching the development of these processes, adapted one after the other and the work produced by these organizations was so markedly superior it made a definite impression on the buying public. Advertising men, purchasing agents, and other interested executives were no longer attracted by low purchase price in buying planography, but rather were interested in quality from the standpoint of the selling job a particular printed piece had to perform.

This change in attitude on the part of the buying public has been comparatively recent. So recent, in fact, that many backward lithograph houses have had their heads cut off and still don't realize it. There are a great many small shops throughout the country headed by gentlemen "of the old school" trying to meet competition with the same equipment and methods with which they started business twenty years ago or more.

The head of a small shop in a moderately large city awoke to the fact that the company income had gradually dwindled to the point where there was no longer any income but an ever-increasing monthly deficit. Panic stricken he began to lop off the payroll, substituting untrained boys for experienced help, and generally cutting down on all expenditures. A friend, realizing this was the first step in committing a slow and perhaps unwitting suicide, counselled strenuously against such a policy. Instead of cutting down, the friend suggested, antiquated equipment should be replaced by modern machinery, even though it be necessary to mortgage all the present equipment. He further suggested that an effort be made to hire highly trained men to operate the shop.

This individual is not alone, as has

New Feeder Equipment

The Christensen Machine Company, of Racine, Wisconsin announce the introduction of Stream Feeders for all types of Letter and Offset Presses. Two distinct types are offered.

First—A feeder designed for application to flat bed and all types of presses having high feed-in point. This radically different machine is illustrated in diagram "A." Some of the features and advantages claimed are listed as follows:

Feeder Pile and separator units are located at eye level fifty-six inches from the floor, eliminating necessity of platform with the attendant climbing, and making possible all Separator, Governor and other rear end adjustments from the floor.

Sheets are fed into gripper bars which travel in a vertical path shaking off all loose scraps of paper and eliminating a large proportion of the paper dust usually carried into the press. This feature prevents chances of battered plates and reduces number of wash-ups necessary.

Sheets are calipered individually over their entire length by a special

vacuum caliper, a feature exclusive to the Christensen. From the vertical path, sheets are deposited in underlapped relation on the new Christensen Feeder Conveyor under the control of driven rolls, and are carried to the front guides in slow motion (average travel of sheet per cycle or impression, being from 8 to 13 inches). Conveyor requires no tapes or top rods, each sheet acting as a hold down for the sheet following.

Due to the slow motion or short sheet travel per impression, mechanical slowdowns are unnecessary, and in turn reduces to a minimum adjustments and settings required.

Second—This type is designed for application to offset and low feed in point machines.

This new machine underlaps sheets directly off the pile. Sheets are separated and forwarded as illustrated in diagram "B." All separation and forwarding is handled from the rear of feeder pile by specially designed separators and sheet forwarders.



been pointed out, there are so many of these men with their heads in the sand it looks like an ostrich convention.

Further, speaking of conventions, it is this type of individual who refuses to cooperate with his fellows in the development of the industry. He is the type who fails to attend conventions where the problems and technicalities of the process are brought up in open discussion, and consequently fails to understand them. It is fortunate, for the good of the industry and humanity in general, that there are many who do not have this attitude; many progressive men, imbued with the spirit of cooperation and development who will not rest until lithography reaches the peak. These are the "fit" who will "survive."

The shop-owner, however, could not be persuaded. He had become so myopic he could not see the advances being made by competitors. He did not realize he was losing customers because the quality of his work was not acceptable. If a color job was out of register it was easier to say, "Well, what do they expect at the price?" than to take steps toward correction of the cause. If a job was late in delivery it was easier to buy the customer a drink than to check on the delay. His final word was, "I'm going to cut down to rock bottom, if necessary. I made a start from nothing originally, and I can do it again." With his head in the sand he will wait for the death blow.

FUCHS & LANG

OFFSET LITHO INKS

AND

LITHOGRAPHIC SUPPLIES

FALCO

PURE EGG

ALBUMEN

Produced entirely in the U. S. A. » Free from adulteration, foreign matter and offensive odor. » Contains no preservatives, but will keep in hot weather. » It is readily soluble and will not coagulate. » Prepared under strict technical supervision in a modern laboratory, insuring uniformity at all times. » Gives better adhesion to the plate, a harder dot, and longer runs. »

A trial will convince you of its superiority.

OFFSET RUBBER BLANKETS

Molleton Powdered Sulphur Flannel

DEVELOPING INK

Opaque Asphaltum Touche

LITHO DUBAR

Protects the design on the plate and insures long runs

SAFETCH SOLUTION

Eliminates danger of Chromic Poisoning

LITHOTINE

A non-irritant, synthetic solvent, possessing all the desirable properties of turpentine, but better than turps for lithographic purposes

ZINC AND ALUMINUM PLATES

Marbles Plain and Grained Abrasives

PRESS CLEANERS

Clean rubber and composition rollers in a few minutes without removing them from the press

VARNISHES AND DRYERS

THE FUCHS & LANG MFG. COMPANY

ESTABLISHED 1870

Division • General Printing Ink Corporation

100 SIXTH AVENUE • NEW YORK

BOSTON CHICAGO CINCINNATI CLEVELAND FORT WORTH
PHILADELPHIA ST. LOUIS SAN FRANCISCO LOS ANGELES

THIRD DIMENSION

in cardboard window displays

by

S . G . H O F F M A N

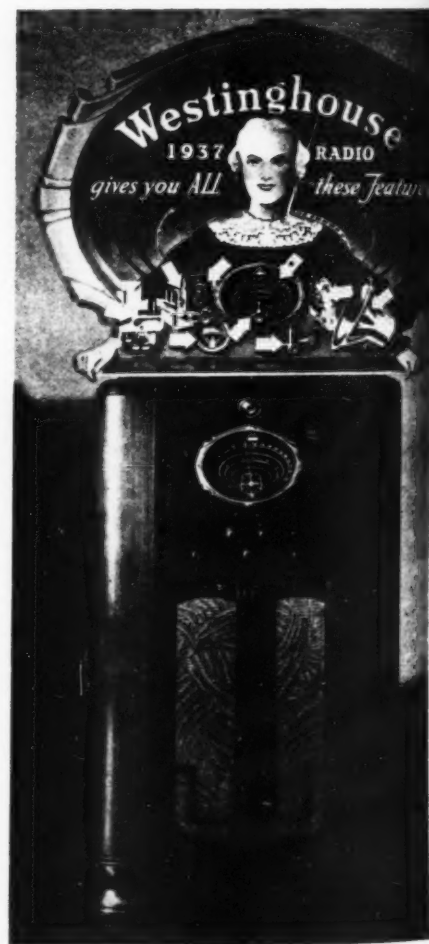
THAT old Chinese proverb—"one picture speaks louder than a thousand words," is eminently true in point-of-sale advertising. Pictorial presentation of the "sales talk" must be the basic consideration in designing window and counter displays, for the success of a window display depends entirely on its ability to attract and hold an audience, register a favorable impression and lure to immediate action. The printed message alone, as in the case of newspaper, publication and direct mail cannot be relied on to "deliver the message to Garcia."

Fully recognizing this fact, display designers and producers have expended endless thought, time and effort in the hope of incorporating greater realism in

cardboard window and counter displays, knowing that the greater the realism attained, the more vibrant and dominating would be the impression registered.

Famous artists have been commissioned to paint beautiful pictures, ingenious minds have evolved the unusual in cutout effects, always with the aim of adding depth to the flat surfaces of these paintings. Light and motion have been enlisted in a further endeavor to create lifelike illusion. None, however, have fully accomplished their purpose, for somewhere there was lacking that elusive

The display at the right was 30 x 40 in. in size, produced by lithography in seven colors and gold. All displays shown on these pages by Graphicut Displays, Inc.



A three-dimensional display produced by lithography and silk screen in six colors.

answer was obvious: There was need for a technique that would make possible actual, sculpture-like third dimension; which would permit of economical production in cardboard and would not create involved handling and shipping problems.

With this objective in view, after numerous trial and error tests, the solution became simplicity itself. A technique has now been developed and perfected that is fool-proof. It permits production of flat elements, which with simple die-cutting and assembly, produce rounded contours whereby different expressive features may be carried with a background including complementary features; with the former features outstanding not only from the background but also from one another—all co-operating to accentuate the impression of depth and distinctness; finally mounted so as to ship flat and be set up at the point of use without the need for gluing or pasting.

This three-dimensional technique is so flexible in scope and so wide in range of application that it produces almost any desired result. It has proved itself in practical use and has earned the acclaim of advertising men and display buyers who heretofore have sought in vain for something "real" in cardboard displays. Photographs do not adequately convey their full impressiveness but illustrated herein are a diversified range of subjects, designed and executed in a graphic and realistic manner.

In the case of the American Safety Razor display, the aim was to depict without supplementary copy, the undiluted satisfaction accompanying the use of the Gem Razor in such a way as to interrupt the attention of the passerby, and impel to action; the pictorial presentation al-



quality necessary to achieve true realism.

Motion and light—either or both—it is true, lent added effectiveness, but only to a limited degree. In actual use they often fell down lamentably because of mechanical difficulties with the various animating devices employed. Their unreliability, their excessive first cost, and the addi-

tional expense incident to servicing installations also militated against their extended adoption. Too often the result was "suspended animation."

What then was the missing link needed to achieve character and dynamic realism regardless of whether humour, human interest or sex was the basic appeal? The

This "sex appeal" display was 14 x 17 inches in size, produced in five colors by letterpress, by Graphicut Displays, Inc.

most writes its own copy thought...
"Oh, Boy, What a Shave!"

Sex was the theme around which the Gotham Silk Hosiery display was designed. The supple limbs, smoothly clad in silken hose tempt the eye... the bulging dress reveals the shapely rounded thighs and marks for attention the "Gold Stripe" trade mark. Altogether it makes a strong appeal to every woman—and maybe to men, too.

The Sinclair Refining Company display sounds a call to action. Summer is coming, long hot days ahead, soon time for getting out on the open road; so dignified and important Mr. Robin Red Breast with chest puffed out warns "Be Prepared."

In the Westinghouse display, the objective was to present in a pleasing and ingratiating manner the all inclusive fea-



tures of the 1937 radio, and at the same time to have a display unit that the dealer could use concretely to point out and emphasize these important advances in radio science. So, a gracious lady, smartly gowned, appears to step forth from a background of the radio dial itself in-

viting attention to each mechanical improvement and its function.

With advertisers competing strenuously to influence attention for their respective products, it becomes clearly more imperative that counter and window displays be vibrantly outstanding for added sales power. True third-dimension therefore, because of its intriguing and potent realism, and because of its novelty is one specific instrument to make sales volume soar.

Up to now it has been available only with plastic materials sculptured and moulded at high unit cost. But with the technique described herein another forward step has been made in the graphic arts field, and third-dimension in cardboard for point-of-sale advertising is destined to play an increasingly important role in the merchandising picture.

*Letterpress and lithography were both brought into play for this Gem display.
Size. 31 x 44. Four colors.*





Greater SPEED and ECONOMY with this ALL-ELECTRIC Carbon Ribbon Writing Machine

The advantages of speed, economy and more attractive printing are yours with the International Electric Carbon Ribbon Writing Machine.

Every mechanical operation of this machine is electrically powered and controlled from the keyboard by a feather-light touch. Each type character is provided with the exact amount of power for ideal printing—regardless of the pressure on the key. Results, therefore are uniformly sharp and clear.

The ease of operation of this machine results in a definite increase in production. Operators are less fatigued, and can do more work in less time. This machine is also used to excellent advantage for direct-to-plate work. Write today for detailed information.

Consider these Big Advantages

1. Every mechanical operation electrically powered.
2. Distinct uniform type impressions due to electrical control.
3. The machine can be used with fabric ribbon for general work.
4. Ease of operation means less fatigue, greater speed and accuracy.
5. Extra long ribbons can be run through machine twice.
6. Perfect type alignment.

INTERNATIONAL BUSINESS MACHINES CORPORATION

GENERAL OFFICES:
270 BROADWAY NEW YORK, N. Y.



BRANCH OFFICES IN
PRINCIPAL CITIES OF THE WORLD

METALLIC LITHOGRAPHIC REPRODUCTIONS

by George Cramer, Sinclair & Valentine Company

THE present tendency toward increased demands for aluminum and gold effects by the photo-lithographic process has spurred on the ink maker in an effort to allow the lithographer to produce such effects with the greatest of brilliancy and with a minimum of grief.

Since the introduction of the several metallic inks for use by the lithographic press, many obstacles have been overcome. The original characteristics of such inks were so foreign to the special demands of the lithographer that only by the great effort expended by the ink maker can metallic copies be made that will satisfy both the lithographer and the buyer of lithographic reproductions. This progress has been especially marked in metallic aluminums and, while the gold bronze field is still in the development stage, there are in this case other means of producing brilliant finishes.

It is the development in the field of special varnishes for metallic inks that the ink maker has concentrated his efforts. In order to allow the metallic inks produced with such varnishes to leaf themselves and thus permit the several metallics to show their true brilliancy, unusual vehicle compositions had to be made that would aid such actions. The usual lithographic varnishes were found to be unsatisfactory for such inks. Almost constant experimentation in an effort to overcome the objections of the regular vehicles has succeeded in bringing on the market a series of so-called metallic ink varnishes. Not all of these new vehicles can be considered entirely satisfactory. The rubbing and binding features, as well as the effect produced, must be considered in rating such products.

Much of the final result in the use of metallic inks depends on the powder

used in their formulation. Up until very recently it was next to impossible to produce metallic ink powders that possessed both brilliancy and covering. This peculiarity is effectively illustrated when a comparison is made with a dusting metallic powder in one case and a so-called ink powder in the other. It is easy to note that the dusting powder has the greater brilliancy, while the ink powder has the greater covering power. This difference is due largely to the size of the individual metallic leafs. A dusting powder would be entirely unsatisfactory for use in a metallic ink due, in the first place, to its poor covering; and secondly, due to its poor working properties (caking and piling). The correct varnish composition in a metallic ink can enhance the brilliancy of the ink powder and in so doing will help to overcome some of its initial shortage in this respect. Very recently new developments, particularly in aluminum powders, have been made so that regardless of the individual particle size, these metallic powders still manifest brilliancies that have been unknown until now. Unfortunately, the gold bronze powders have not kept pace with the aluminums in this respect. Continued efforts will eventually produce results here also.

Although the aluminum inks have been developed to a stage where they can be run on a lithographic press without difficulty, we find that this cannot be said of inks produced with the Gold Bronze Powders. Yet many beautiful metallic lithographic copies are produced daily by means of the lithographic size and dusting process. It is by this method that the Gold powders can be utilized in such a way as to retain their greatest brightness and brilliancy. As is indicated above, however, an extra step is necessary in this process and at times special care

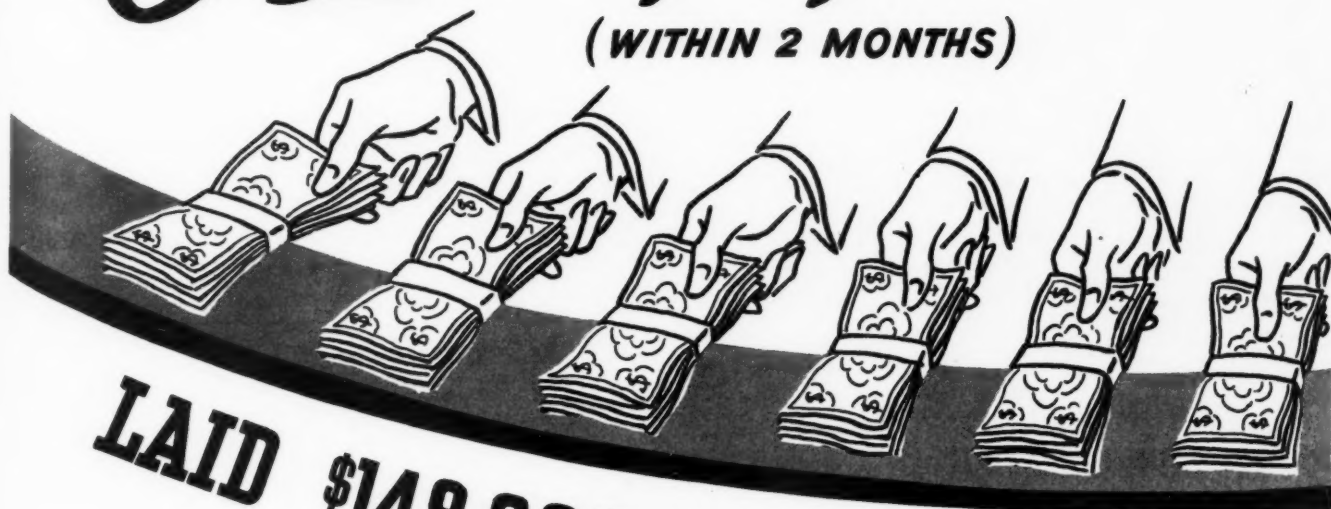
must be taken to secure proper binding of the metallic powders.

As is the case in all other finished results, so is it true that paper and ink must be balanced in order to obtain good effects for metallic lithographic reproductions. It is natural to assume that different stocks must be employed in order to produce the wide variations of finish that are demanded of the lithographer. The vast differences in the characteristics of pigments as compared to metallic powders make it more important that stocks be of a definite finish. The cohesion of any metallic ink is of such a nature as to allow the vehicle or binder to be absorbed into the stock much more readily than is the case with regular lithographic inks. One can readily see that for best results it is essential that stocks employed for metallic lithographing must be non-absorbent, or nearly so. Where absorbent stocks are used it is almost impossible to produce finished sheets that do not rub off to a degree. Adjustments can be made in metallic inks to overcome these stock differences, but they must be made at a sacrifice of brilliancy. For lithographic metallics of the greatest brilliancy and of the best holding, it is essential that the facts indicated above be given careful consideration.

The behavior on the lithographic press of an Aluminum Ink can not be expected to be quite as good as regular colored or black inks. The inherent qualities of the various Aluminum powders are such that if the necessary corrections were made there would result other features that are much more undesirable than an occasional stop to clean off the plate or blanket. The correct varnish compositions together with improved metallics will go far in avoiding excessive press difficulties as well as producing a lithographic effect of unusual merit.

6 Lithographers

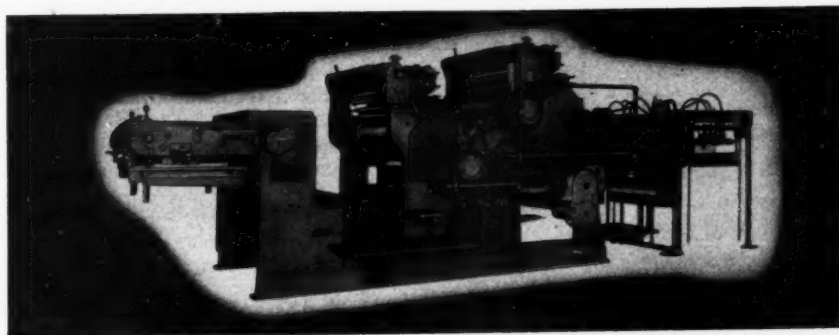
(WITHIN 2 MONTHS)



LAI **\$148,000.00 ON THE LINE**

TO SAY... *"We prefer..*
HOE SUPER-OFFSET PRESSES"

Purchasing a total of nine Hoe Super-Offset Presses... within the brief period of sixty days... six lithographers pay tribute to the superiority of Hoe design and construction. Not today alone but through the years to come this wise choice of equipment will assure fine quality printing, accurate register, a high production record, with a minimum of maintenance... the recognized features of every Hoe Super-Offset Press.



R. HOE & CO., Inc. General Offices: 910 East 138th Street (at East River), New York City
Boston San Francisco Chicago Birmingham London

HOE *Super-Offset* **PRESSES**

JANUARY, 1937

KNOW YOUR SALESMAN

by James W. Hurlbut

SO you've just hired a new salesman! Take a look at him. Is he tall or short, lean or plump, light or dark? What's his background? Does he like to eat? Does he laugh easily? Does he speak fluently or deliberately? Does he dress quietly or flamboyantly? What does he read? Does he like music, the theatre, the movies? Is he married or single? If single, does he live alone, with his parents, or with a roommate?

Probably you can answer some of these questions, but the more you can answer, the greater are his chances of becoming a successful salesman in your organization.

When you buy a new part for a machine in the shop you do not put it beside the machine and trust in some mysterious alchemy to assemble it in its rightful place. Rather you study its construction, read about it in a book of instructions, and then carefully fit it into the machine. Your new salesman is infinitely more important and delicately constructed than an inanimate piece of steel, and, for proper functioning in your organization, must be thoroughly understood.

In the first place, your salesmen are the most vital cogs in your organization. They represent your personal contact with the public. Unless they operate smoothly the whole organization will suffer. Surely, if you oil your shop equipment and give it careful attention, it is even more necessary to coddle your sales equipment.

In the second place, your salesmen represent a great investment on your part. Not the investment in such things as salaries, drawing accounts, and training time, but the investment

in good will. You are investing in every salesman every day a portion of the good will of your concern. If the salesman isn't feeling at his best—if his feet hurt, his breakfast was bad, or he had a spat with his light of love—he is going to endanger, unwittingly, your good will with every customer he calls on that day. The more you know about how he is constructed, the better able you will be to keep him in mental and physical trim and minimize the frictional loss of good will.

What do you do when a moving part in a machine is not running up to standard—when it creaks and groans as it works? Do you bathe it in oil, or do you douse on a good shot of corrosive acid? Suppose your salesman has been running off form—down in the mouth, not making the calls he should, or not turning in inquiries. Do you call him on the carpet, give him hell, and threaten him with everything from instant dismissal on up to assassination: or do you get out the old oil; tell him how much faith you have in him, how you rely on him, how you appreciate his loyalty to the company; and how sure you are of his ultimate success? Try the oil, it usually helps.

Going back to a previous analogy, is your salesman a part of the machine, or have you left him outside to be assimilated by that mysterious alchemy of which we spoke? Everybody in the world is potentially a successful salesman, but it takes three things to make them practically successful—knowledge of what they are selling; faith in the product, and the company; and, most important, faith in themselves. Granting that the product and the

company are meriting of faith, it remains for you to impart the knowledge concerning the product, and instil the individual's faith in himself. Take him into your confidence, ask his advice in matters of policy, give him your attention and tutelage. His personality, as it reveals itself to you, will be your book of instructions that will enable you to assemble him into the organization. Put him solidly into the machine in the first place, and he will operate more efficiently afterward.

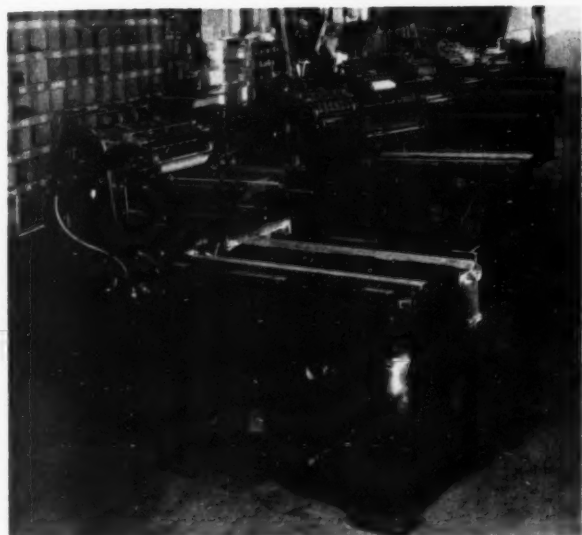
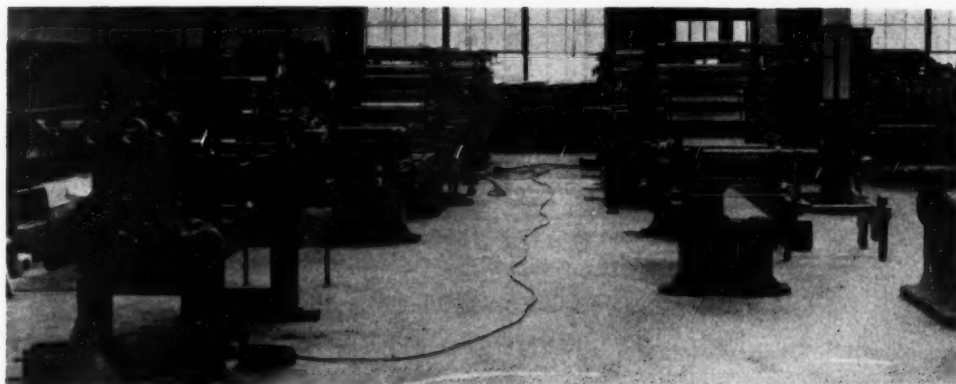
Perhaps he is absolutely green when he comes to you. Don't give him a portfolio of samples and a slap on the back—or a kick in the pants—and send him out to do or die. Unless he is gifted with uncommon self-assurance he will walk past the offices of twenty prospects before he develops enough nerve to go in, feeling as he does that once he gets in he won't know any more about what he is selling than he does about the sex life of an amoeba. The first question from the prospect will probably floor him. Anticipate the questions—give him the answers before he goes out. Surely, with your experience, you can ask more and better questions than the average prospect, and supply the answers as well. Even though all plant owners can't afford to put a prospective salesman through a practical shop and office training course, no plant owner can afford not to devote some time to personal instruction.

There is an employer, not a lithographer, who has devised a simple trick to instil confidence in his new salesmen. Early in their calls, perhaps the

(Continued on page 58)

ACHIEVEMENT

Webendorfer Web Reel-
Feed Offset Presses Under
Construction



Webendorfer Little Giant Cylinder Presses
Under Construction

Our production lines have been going full capacity during the depression building small automatic presses which can be operated economically. Printers and lithographers have been buying these presses as fast as we can complete them.

SHEET OFFSET

SHEET SIZE

12 x 18

17 x 22

22 x 26

22 x 29

LETTER PRESS

LITTLE 10 x 15 GIANT

WEB UNIT OFFSET

11 x 17

17 x 22

22 x 34

and up

To meet the demand for making better deliveries in 1937, we have just completed a building giving over 12,000 square feet of additional factory floor space in which we have installed a large volume of new machine tool equipment.

Webendorfer 17 x 22 Off-
set Presses Under Con-
struction



American Made by

WEBENDORFER-WILLS CO., INC.

Builders of Printing Machinery for Over Thirty Years

MOUNT VERNON, NEW YORK, U. S. A.

INVESTIGATE

Know Your Salesman

(Continued from Page 56)

first or the second, they come upon a prospect who asks intelligent questions, brings up stock objections, and finally gives in and places an order. This man is a friend of the employer and has been previously coached in his attitude toward the salesman. It works rather well.

You don't have to be a doctor of psychiatry to understand enough practical psychology to successfully handle a group of salesmen. Every football coach employs plenty of psychology in handling his team—the better his psychology, the more impressive the record of his teams. Whether you started as a salesman or came up through the shop, you still must have learned the art of getting along with people, or you wouldn't be the boss. Don't save it all for the customers, use it on the salesmen—they're important, too!

Six Hoe Super-Offsets Ordered in 30 Days

C. W. Dickinson, Manager of the Offset Press Division, R. Hoe & Co., Inc., has just returned from a five weeks trip through the Middle West with highly tangible evidence of increased optimism and activity in the lithographic trade. Mr. Dickinson returned with orders for six new Hoe Super-Offset Presses—all sold in the territory he covered during a period of 30 days.

Reliable Suppliers . . .

The advertisers who appear in every issue of *The Photo-Lithographer* have made possible this outstanding lithographed medium.

They deserve your fullest support.

WHAT

?

determines the choice of a trade paper as an advertising medium?

1. Editorial content
2. Quality of Physical appearance
3. Thoroughness of market coverage
4. Quality of coverage
5. Cost of coverage.

WHY

?

does The Photo-Lithographer return dividends to advertisers?

1. Because of its proved reader acceptance
2. Because of its authoritative treatment of vital lithographic subjects.
3. Because it is a lithographed publication geared to the practical needs of the industry.

HOW

?

can you assure yourself of more sales of lithographic equipment to the rapidly growing market represented by those now operating lithographic equipment as well as those contemplating entry into the field?

By following the example of the outstanding suppliers* to the lithographic industry who are now using this outstanding medium effectively and economically.

* Turn to page 96, this issue.

You can tell your sales story to every lithographic plant in the United States and Canada, every month, by contracting for space in this outstanding lithographic medium. Send for new folder outlining the market served, editorial appeal, circulation breakdown and other pertinent facts.

The Photo-Lithographer
1776 BROADWAY NEW YORK, N. Y.

AN ANALYSIS OF THE VALUE OF "SMALL" LITHOGRAPH EQUIPMENT

Reprinted from "Building Business or Destroying Markets?" Published by
Graphic Arts Association, Houston, Texas.

FOR YOUR information, and for such use as you desire to make of it, our investigation and actual trial of the *** Machine shows:

1. Quality

This process can produce an acceptable quality of work for office forms, advertising circulars in one color or two colors when not requiring close register. Its quality does not measure up to that produced on well-known offset presses.

2. Operation

The manufacturers claim the press can be operated by a \$14.50 clerk or stenographer. This is probably true if the work done is confined to one color office forms or other simple one-color type jobs. However, our test indicates that such class of help could not produce satisfactory results on more complicated work requiring reproduction of illustrations, two color work and the like. This conclusion is made because the *manufacturer's own skilled demonstrator* himself experienced considerable difficulty in producing what we consider rather simple advertising printing.

Regardless of their claims to the contrary, there is quite a lot of technical knowledge and first class thinking required to operate this machine efficiently and produce good acceptable quality. Certainly an operator capable of operating this machine is worth considerable more than \$14.50 per week.

3. Cost

We carefully prepared cost of operation figures on this machine based on various degrees of productivity. We understand that the manufacturers in selling the machine base their calculations on 100% productivity. That is 8 hours productivity per day, every working day in the year—an obviously impossible attainment under the most favorable circumstances.

At 75% productivity, based on a 40-hour work week for one year, the machine does have a very low cost. To obtain such a cost, however, the machine would have to run 1560 hours per year (40 hrs. x 52 weeks = 2080 hrs. 75% = 1560 hrs.). Such production of course would require a full time press operator plus at least two assistants to prepare plates and keep stock paper for the press. At this rate of production, the machine should produce at least 4,680,000 printed sheets per year (390,000 per month). However, when the limitations of the machine (see below) are considered, there is probably not one user of printing in Houston who has enough work of the *right size and class* (that can be produced on the machine) to ever reach such a degree of productivity.

At a lesser degree of productivity—50% or 35% of capacity—the machine, while probably of some convenience, will not effect any substantial saving. What the user of printing fails to consider before buying a ***, is the fact that materials and labor are the principal costs, together representing about 60% of the selling price. The user of printing who buys the equipment can not hope to buy paper any cheaper, if as cheap, as the printer.

In structure the machine must be regarded as "light weight" equipment. In our opinion it will not economically stand the wear and tear of continuous manufacturing. In the Printing Industry machinery depreciation is calculated upon the basis of a "life" of not less than a ten-year period. With this makeshift equipment we believe that the efficient "life" of the machine will be considerably less than five years, and therefore the cost for depreciation—not considering repairs and replacements—will be *double the amount used by the custom printing plant*.

From the standpoint of labor and its cost, it is true that the Printing Industry pays its press operators

MEASURED OPERATING COSTS

10x13 MAKESHIFT OFFSET LITHOGRAPH PRESS

Based Upon ACTUAL FACTS, PROVED RATIOS AND OPERATING EXPERIENCE

INVESTMENT	MONTHLY Total Cost	HOURLY COSTS		
		70% Chargeable	50% Chargeable	25% Chargeable
Rent.....	3.60	.032	.045	.090
Insurance.....	.50	.005	.006	.012
Taxes.....	.75	.007	.009	.019
Depreciation.....	12.50	.112	.156	.312
Wages.....	116.00	1.036	1.450	2.900
Light.....	.50	.005	.006	.012
Power.....	2.00	.018	.025	.050
Direct expense.....	15.00	.133	.188	.375
Total factory expense.....	150.85	1.348	1.885	3.770
General factory.....	13.00	.116	.162	.325
		1.464	2.047	4.095
Administrative expense.....	34.00	.304	.424	.850
Shipping and delivery.....	12.00	.107	.150	.300
		1.875	2.621	5.245
Selling expense.....	37.00	.330	.462	.925
Total cost.....	246.85	2.205	3.083	6.170
Total possible time.....	160.0			
Chargeable hours.....		112.0	80.0	40.0
Makeready.....		11.0	8.0	4.0
Running.....		101.0	72.0	36.0
Total impressions. Average—3200 per hour.....		323,200	230,400	115,200
Factory cost per M.....		.46	.64	1.28
Cost excl. sell and S. H. per M—run. time only.....		.50	.82	1.64
All inclusive cost per M—run. time only.....		.69	.96	1.93

The preceding figures show a manufacturing cost of \$1.93 per thousand on these makeshift machines, and such costs are for presswork only. To this must be added elements of bindery cost, such as numbering, perforating, punching, gathering, etc. In other words, the only portion of the production work that the "makeshift" process can really do is that of presswork, and, as slight investigation will show, presswork, while not necessarily a minor element in manufacture, is certainly not the major element, and, generally speaking, does not equal either the cost of the paper or any other cost of manufacture. From these facts you can readily appreciate that the "makeshift" lithograph equipment is limited in capacity, inferior in quality and fails miserably to live up to its touted claim of economy.

Prove the "need" of the machine. How much production time would the total available volume demand? Prove it this way: How many thousand pieces of printing (per month) would you need to manufacture? $100,000 = 25\%$; $200,000 = 50\%$; and $300,000 = 75\%$; and thus you find the cost, and if you could save as much as 52% , this saved amount would not compensate for the investment, the risk and the added responsibility.

thirty to forty dollars per week. Nevertheless, there is a definite measure of economy in this practice as compared to the possibilities when using a clerk or stenographer who may be paid only \$14.50 to \$20.00 per week. First, the journeyman has received several years basic training in the operation of his equipment, and as a result he will produce a larger volume with less spoilage of paper stock and other materials. Second, being a trained mechanic, he provides an understanding watchfulness that protects and preserves his equipment. Third, his experience and training will enable him to apply craftsmanship qualities in the handling of all kinds of forms and materials.

As the makeshift equipment will not produce anything but presswork, its installment and use will necessitate the purchase of much outside material: composition, bindery material and bindery operations such as perforating, punching, numbering and so forth. In the event that the private plant operator endeavors to perform such light bindery operations, it will necessitate the investment of additional moneys for the machines necessary for such operations. And, the labor employed to operate and/or perform same will be paid at a rate equal to or more than like labor in the custom printing plant. Therefore, these elements of production become a burden to the private plant operator, and, instead of showing a saving, will actually create elements that will be in excess of the amount which would be charged by any efficiently operated plant in the Printing Industry.

There is also an additional element of cost which must not be overlooked. In operating his own equipment the private plant owner *must assume* 100% of all overhead items, whether it be interest on investment, idle, or non-productive time, depreciation, obsolescence, or

what not. Dealing with the custom plant operator, he buys only a small proportion of these elements of cost; whatever they total in relation to the amount of time actually necessary to produce his individual order. This, too, is an economy.

4. Limitations

The machine will take a maximum sheet 9×14 inches. Hence it cannot print any sheet larger than that. While this size permits the machine to produce a good many forms used by a business, most business have a number of larger size forms (and the most costly forms) which this machine cannot handle. Because of its size it cannot produce at a low cost the large-quantity (and more expensive) printing jobs that can be run two, four, eight and sixteen up on larger printing presses.

For example, an order of 50,000 or 100,000 of a form $8\frac{1}{2} \times 11$ or $8\frac{1}{2} \times 14$ can be run two-up (two at a time) on the larger printing press at lower cost than one at a time on the "makeshift" equipment.

Besides these press size limitations, the equipment (according to the manufacturer's demonstrator who conducted our tests) cannot efficiently handle tissue paper and certain other thin papers. It cannot handle numbered jobs, heavy cardboard, envelopes, cards or paper smaller than 5×8 inches, which includes business cards and certain other complicated work.

Reprinted from "White Elephants" through courtesy of The Southern Master Printers Federation, Inc., Nashville, Tenn. "White Elephants," a convincing argument against the operation of private printing plants, may be secured by application to the organization.

Your Cooperation Solicited

IT has been suggested that we gather from photo-lithographic plants throughout the country actual experience information on the cost of turning out work on various size equipment.

We are therefore carrying below a form which we would like very much to have every photo-lithographic plant fill in and return. We will compile the information and average it, and return copy of this average to those plants who cooperate in this work.

<i>Plate Size</i>	<i>Square Inch Area</i>	<i>Plate Cost with Paper Negatives</i>	<i>Makeready and First 100 Copies</i>	<i>Running Additional Thousand</i>	<i>Hourly Rate</i>	<i>Running Time for Additional Thousand Sheets</i>
14 x 20	280	\$	\$	\$	\$	
17 x 22	374					
19 x 25	475					
20 x 26	520					
22 x 28	616					
22 x 34	748					
28 x 42	1176					
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38 x 50	1900					
44 x 64	2816					

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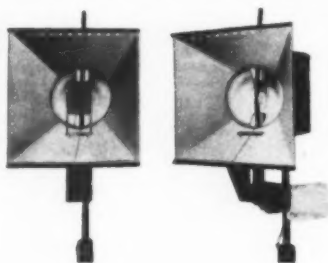
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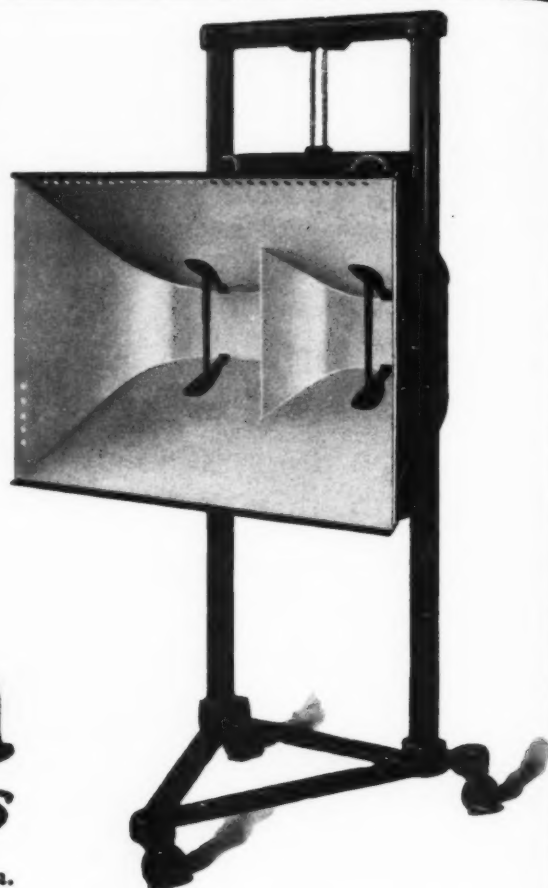
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What Is the Fairest Method of Paying the Printing Salesman?

by Oliver Wroughton

Secretary, Graphic Arts Organization, Kansas City, Missouri

MANY methods have been tried as a solution of the difficulties surrounding the question of proper compensation for printing salesmen. Among these are the following:

1. A commission based on volume sold.
2. A commission on volume sold above cost.
3. A commission on margin over cost.
4. A commission on a minimum price plus a bonus when sold above the price furnished.
5. A straight salary.
6. A salary plus a salary bonus.
7. A salary based upon volume plus a share of the margin over cost.

A "margin over cost" as used in this article is intended to mean the difference between the cost and selling price when jobs are sold for more than the cost as shown by the individual job summaries.

It is obvious that any plan of compensating salesmen can succeed only in proportion as mutual benefit is derived from it by the salesman and the printing concern he represents.

A commission based upon volume sold protects the house against unbalanced selling costs but fails to give the salesman a definite income against which he can adjust his personal expenses. The price of printing must be determined for each individual order and is dependent largely upon human equations. Therefore, a commission based upon sales encourages an effort for volume in disregard of

THE accompanying paper on Methods of Compensating Printing Salesmen is reprinted from the American Printer. The article is thorough and worthy of study by employers who are interested in a fair method of paying their salesmen.

profit. The salesman feels that competition must be met and that profit is a problem of the production department; hence, he urges the printer to give him prices which will command volume. He is more interested in selling a job than in building an account.

If the commission is based upon jobs that margin over cost only, the salesman becomes critical of the production department. He is satisfied with the smallest margin which will permit him to include the job in the commission column. He is tempted to substitute materials or cheapen the job to make it margin in disregard of the interests of the customer.

If the commission is based entirely upon margin over job summary cost, the incentive is toward excessive margins. The salesman is over-critical of the production departments. Disputes are aggravated and co-operation is difficult. Also, no definite income is provided to enable the salesman to meet his expenses.

When the commission is based upon a minimum price with a bonus for

selling above the minimum, the incentive is to encourage the salesman to seek the lowest possible minimum price from the house to enable him to meet competition and secure the largest possible bonus. This plan does not encourage the buyer to purchase on the basis of confidence in the house. Also, the salesman is encouraged to make extravagant promises in order to secure the best possible price, because he is not penalized when the cost of production exceeds the minimum price to him. He is more interested in making his bonus than in the house realizing a profit.

When a straight salary is paid in disregard of volume or margin over cost, the salesman, having his salary secure, is prone to be satisfied and to lack that constant necessary urge to fight for business at a profit. He is more interested in keeping his volume up to justify his salary than in profit for his house. On the other hand the house has complete control of the salesman who is paid a straight salary. This kind of control often costs the house money. You can drive a horse to water but you can't make him drink. If the horse is thirsty, he will find water and drink it.

If the salesman is paid a salary bonus based upon his percentage of margin over job summary cost, he has an inducement to sell at a profit. Usually this bonus is measured by giving him an additional percentage of his salary equal to his percentage

of margin over cost as shown by the individual job summary record of his sales. That is to say that if his margin is 20 per cent of his total sales, he is given a 20 per cent salary bonus.

To illustrate, suppose a salesman is paid \$200 per month and sells \$3,000, which costs \$2,400 and shows a job summary margin of \$600 or 20 per cent of his sales. He then receives a bonus of 20 per cent of his salary or \$40, making his total income \$240 per month. However, his bonus is entirely dependent upon his ability to sell above cost, and he would receive the same bonus for selling \$1,500 at a margin of 20 per cent as he would receive for selling \$5,000 at a margin of 20 per cent over cost. Therefore, he is more interested in margin than in volume.

Profit Is Essential

All of the foregoing methods have met with some success under various circumstances and conditions. In the last analysis, the salesman must be paid in proportion to the benefit derived from his efforts. The printer is in business to make a profit. He must deliver service. He must have volume. He must sell for more than his cost of production. The salesman must command a justifiable volume at a profit to continue to draw his salary commission or bonus.

Therefore, it is logical and practical to apply the basic principle that sales compensation should be partly derived because of a justifiable volume of printing sold and partly in proportion to the profit earned thereon.

The printing industry must secure the highest possible type of salesmen, men who are willing to improve themselves and capable of recognizing the absolute need of accurate cost and accounting as well as the problems involved in producing the printing product.

Therefore, we recommend that all salesmen in the commercial printing field be employed upon the basis of a salary in range of 10 per cent of the

cost or 8 per cent of the selling price of printing sold by the salesmen, plus 25 per cent of the margin over cost as shown by an accurate job summary cost record conforming to cost methods recommended by the United Typothetae.

In the small and medium-sized plant the solution of the selling problem is for the proprietor to keep accurate costs, employ competent workmen who can operate the plant in his absence, and do his own selling. The cost of educating salesmen is too great in proportion to the volume the plant can produce to justify the salesman a living salary in addition to a profit for the proprietor. By doing his own selling the proprietor is released from the hazard of paying a salesman to build up a volume of sales and then having him accept a better offer from a larger firm. The cost of training salesmen in the printing industry has been borne too long by the small and medium-sized plant.

Printing plants which require a larger volume than the proprietor or proprietors can sell must, of course, employ salesmen. They must secure salesmen who can meet any buyer upon a par. To secure men who are capable, they must pay them a fixed salary. Such salary must be based upon the volume of business they can sell to the benefit of the house.

There are some advantages in basing salary upon the cost of jobs sold, which method gives the salesman some offset when jobs fail to margin because the percentage upon which salary is based follows the cost even though the cost exceeds the selling price. However, 25 per cent of a margin is greater than 10 per cent of that share of the cost which should be profit if the job fails to margin.

When salary is based upon volume sold, there is no complication or complaint so far as salary is concerned, provided the volume is profitable and sufficient to justify a living wage. However, when a share of the margin is added to a fixed salary and no

margin appears, the salesman often feels that he is unjustly penalized. He has no control over the production department and feels that he should not be made to suffer because of the inefficiency of the production department or the failure of the house to price the job properly.

Basing salary upon cost tends to minimize disputes and penalizes the salesman less than the house when jobs fail to margin. Disputes, however, are not as frequent as might be supposed when accurate costs are kept. Also any printing firm has sufficient production data at hand to enable them to settle any such argument. The Typothetae Production Records should be satisfactory to any printer or salesman in checking the efficiency of the production department.

Normal Compensation for Salesmen

The percentages herein indicated are used to indicate what normally should fully compensate salesmen as a reward for constructive selling. They can be adjusted to fit various classes of printing and can be increased when the business is composed of small orders or decreased when the business is composed of large orders. The principle involved is that salesman compensation should be determined partly by volume sold and partly in proportion to margin earned.

A new salesman can be encouraged by basing his salary upon a higher percentage of his sales than is herein indicated or by allowing him a larger percentage of the margin over cost upon the first \$500 or \$1,000 sold each month, applying normal percentages after a certain amount has been sold.

In order to afford a perspective view of this method of compensating salesmen, let us suppose that salesmen are employed upon a basis of fixing salary upon 10 per cent of the cost of the printing sold, plus 25 per cent of the margin as shown by the job summary records.

(Continued on page 68)

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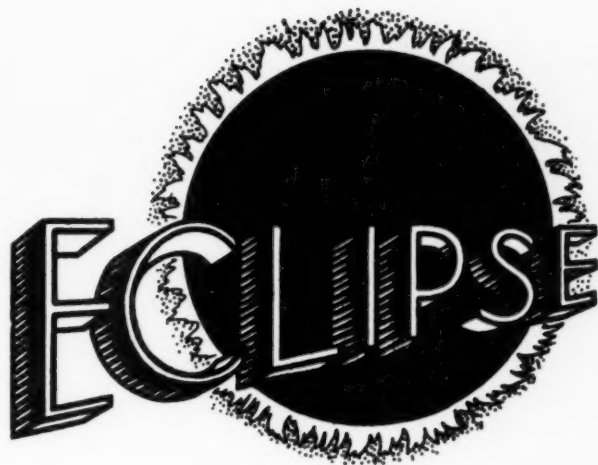
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Salesmen's Compensation

(Continued from page 66)

Price	Cost	Margin	Salary	Sales- man's Profit	Sales- man's Income	House Margin
\$3,000	\$2,400	\$600	\$240	\$150	\$390	\$450
3,000	2,700	300	270	75	345	225
3,000	3,000	None	300	None	300	None
3,000	3,300	None	330	None	330	Loss

Now let us suppose the same analysis of salesmen employed on the basis of a salary of 8 per cent of sales plus 25 per cent of the margin.

Price	Cost	Margin	Salary	Sales- man's Profit	Sales- man's Income	House Margin
\$3,000	\$2,400	\$600	\$240	\$150	\$390	\$450
3,000	2,700	300	240	75	315	225
3,000	3,000	None	240	None	240	None
3,000	3,300	None	240	None	240	Loss

The printing industry has been furnished the most comprehensive cost and accounting system it is possible to devise. It is adaptable to the smallest plant in operation and sufficient for the largest and most ramified business. There is no help for the printer who does not keep an accurate cost upon jobs done, or who disregards costs when ascertained.

Experience shows that there is no substantial difference in manufacturing costs among printers doing printing of the same class or quality. There is a substantial difference in the service rendered by different printers. Letterheads can be produced upon paper costing from 6 to 60 cents per pound with a variation of 100 per cent in cost of production and 500 per cent in quality. Such a variation of values cannot be reduced by a fixed price basis and yield a profit to the printer.

The printing industry does not help itself by selling below cost. When cost can be reduced or quality increased or service improved to offset cheap printing, the problem of selling is partly solved. There are buyers who think they must save by buying for less. Improving the view of such

buyers to realize that they may save much more by paying more is the real need for printing salesmanship.

There are printers who never make money, even when times are good. There are others who always make some money, even when times are poor. They have something besides price to sell, they know what it costs to produce good printing, and they adhere to their costs.

Experience has proved that the sales cost of a salesman devoting his entire time to selling printing is greater than the average selling cost of the institution he represents because every company which has long been in business commands a certain volume against which no direct selling expense is chargeable. It is not our desire to deny the salesman full compensation for the service he renders. The better the printing done, the greater must be the cost of selling. However, the principle of balancing the total income of a salesman partly upon volume sold and partly in proportion to profit earned should always be kept in mind.

When the printing industry determines to keep accurate cost upon every job sold, to adhere to costs without equivocation, and to compensate all salesmen by paying a fixed salary based upon volume sold plus a proper share of the margin earned, the best selling talent will be attracted to the industry. Printing salesmen will become interested in devoting the proper time to training and study of the problems of printing salesmanship and will acquire the proprietary angle in their selling efforts.

Then the printing industry will become profit-minded and able to control ample equipment to carry a peak load, and will refrain from using such extra equipment to demoralize the industry or unjustly attack the business of a competitor with no consideration of profit to the industry which should pay its share of income taxes to help balance the national budget.

A FORECAST

"Lithographers and printers, large and small, are going to sell far more of their product in 1937 than ever before. The old demand," says Mr. Porter, "for offset, plus thousands who are only beginning to buy now, plus other thousands who daily are turning to the special sales advantages resulting from offset, plus still others who represent population increase in our growing country, and finally those thousands who are rushing to buy after years of inactivity, will total a volume that should gladden the hearts of the industry."

"The demand for modern high speed printing equipment in all branches of the graphic arts industry will reach an all time high level during 1937," says H. A. Porter, Vice President in Charge of Sales, of the Harris Seybold Potter Company of Cleveland, Ohio. Mr. Porter in part bases his opinion on unprecedented interest evidenced by printers and lithographers throughout the country in the Company's eight new models of offset presses in sizes to give complete coverage of the market.

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THE NATIONAL ASSOCIATION OF PHOTOLITHOGRAPHERS

THE SUREST way to weld together into one strong industry the many small and medium size plants installing lithographic equipment, is to make available to these plants information which will help build solid, profitable units. No industry can be strong unless the units thereof are healthy. Much strength comes from avoiding the mistakes of others who have already traveled this way.

For three years The National Association of Photo-Lithographers and its regional units, have studied costs, production standards, trade practices, stabilization, advertising, sales promotion and selling for the purpose of serving the industry.

As a result of this activity many worthwhile benefits have been established, all of which are available to any owner of lithographic equipment. This vitally important data includes such information as:

1. Cost forms designed especially for the photo-lithographic industry.
2. Economic Hourly Costs for equipment used in the industry.
3. Production Standards for equipment used in the industry.
4. A series of lectures delivered in sessions held in New York and Philadelphia on Selling Photo-Lithography and Estimating. This valuable material has been lithographed in four, eight and sixteen page booklet form, punched for a ring binder. These lessons contain a mass of information helpful to salesmen and other personnel in the plant.

5. A wealth of other data on equipment and supplies offered for sale, on legislation or rulings, etc., etc., which tend to affect photo-lithographers adversely.

6. A year's subscription to The Photo-Lithographer, a lithographed publication which has grown from a four-page folder to a position of leadership. Each issue is replete with information of much value to the photo-lithographer. The publication's aim is to increase sales, efficiency, and quality. Its rapid growth is eloquent proof of its importance to the entire industry.

So as to further organize the industry and press on with the work started, the association has set low membership dues. All of the information listed in this message is available under the following membership dues:

Initiation fee for all first year memberships.....	\$15.00
Multilith or other press equipment	
smaller than 12 x 19	\$10.00 per press
Press equipment 12 x 19 or smaller than 17 x 22	12.50 per press
Press equipment 17 x 22 or smaller than 22 x 34	15.00 per press
Press equipment 22 x 34 or smaller than 36 x 48	20.00 per press
Press equipment 36 x 48 or larger.....	25.00 per press

All dues are payable quarterly or annually. Minimum dues per annum are \$25.00 exclusive of initiation fee. Maximum Dues are \$250.00.

We believe every owner of lithographic equipment can benefit from joining with us in our work for the industry. An application blank is attached to help make it possible for us to press on with the work we are doing.

APPLICATION FOR MEMBERSHIP

We hereby make application for enrollment as an Active Member in The National Association of Photo-Lithographers, and if elected, agree to abide by its By-Laws and support its objects and interest as far as our time and ability will permit.

We enclose herewith \$.....as dues, it being understood that of this amount \$3.00 is payment for one year's subscription to The Photo-Lithographer.

It is understood that membership makes available the services maintained by the Association.

Our membership begins from date of election by the Board of Directors and may be terminated only through the procedure as set forth in the Constitution and By-Laws of the Association.

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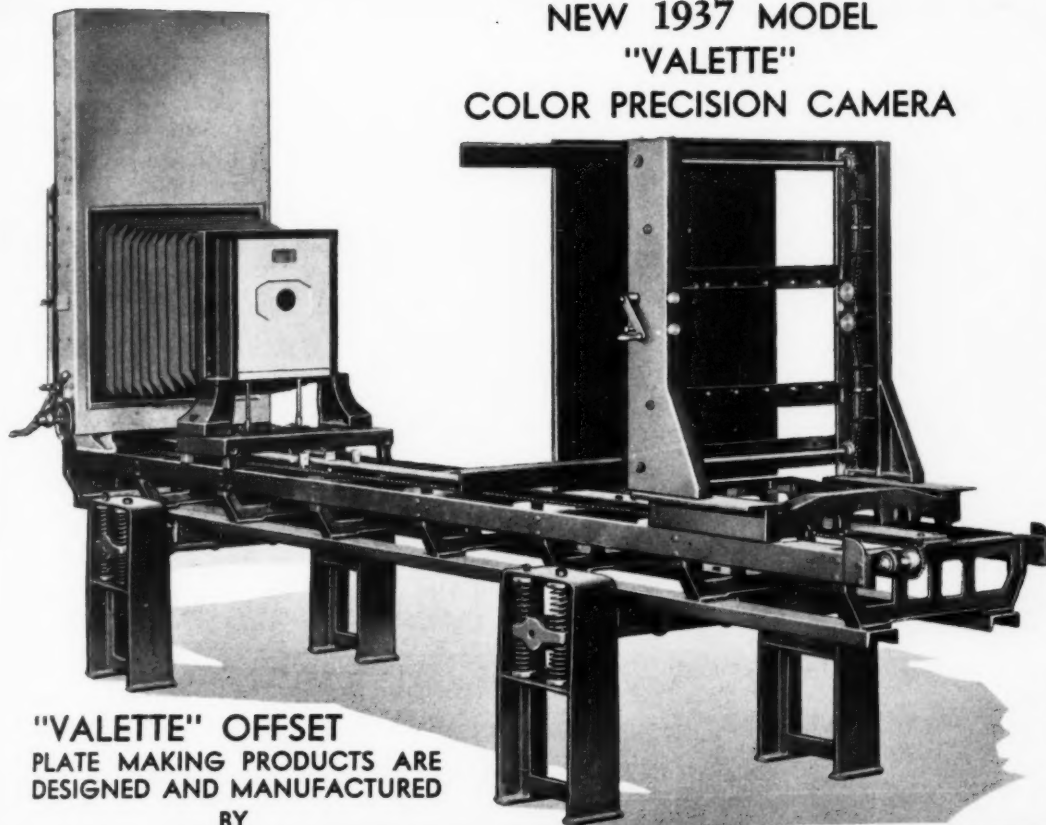
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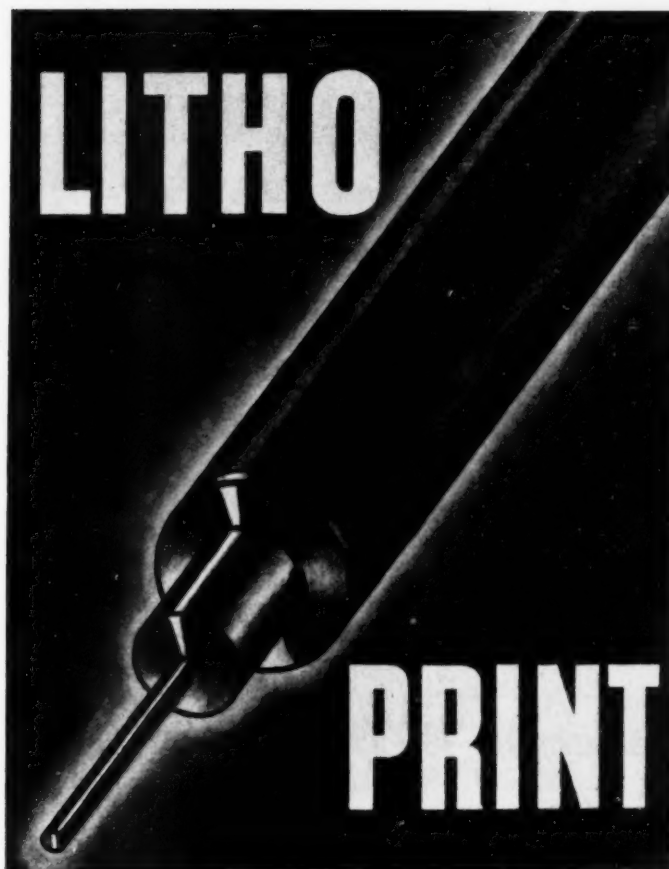
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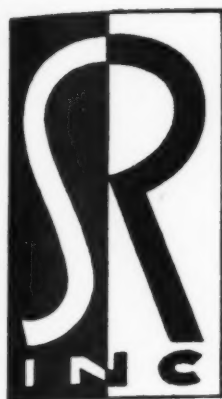
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 ter, N. Y.
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 New York, N. Y.
 Pitman, Harold M., Co., 150 Bay St., Jersey City,
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 Ill.
 Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y.,
 & Scranton, Pa.

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 N. Y.
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 International Printing Ink Corporation, 75 Varick
 St., New York, N. Y.
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 cinnati, Ohio
 Roberts & Porter, Inc., 100 Lafayette St., New
 York, N. Y., and 402 S. Market St., Chicago, Ill.
 Siebold, Inc., J. H. & G. B., 47 Watts St., New York,
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Lithographic Abstracts

Abstract of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Information concerning the books or periodicals abstracted may be obtained directly by addressing the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Photography and Color Correction

Film vs. Wet Plate. A. C. Austin. *National Lithographer* 43, No. 11, Nov. 1936, p. 23. The author recommends the substitution of film for wet plates in the interests of speed and economy.

Stripping Film in Photo-Engraving. V. W. Hurst. *Photo-Engravers Bulletin* 26, No. 4, Nov. 1936, pp. 72-6. Types of modern stripping film are discussed, with emphasis on precautions to be taken. It is important, in changing over to strip film, to follow instructions exactly. The control of time and temperature of development, the use of an acid rinse, or shortstop, and of clean glass are all important. A chrome alum fixing bath should not be used. The author believes that the correct use of stripping film is cheaper than that of wet plates, on the average.

Producing Photomechanical Printing Surfaces. I. G. Farbenindustrie A.-G. *British Patent* No. 442,887 (1936). In a process for producing direct positives for autotype purposes from a line or halftone copy, a film comprising a light-sensitive gelatin layer carried on a transparent support is exposed through the support under the copy, developed with a tanning developer, well washed with warm water to leave the gelatin relief, dried and dyed with a solution of a dye which dyes the parts of the support laid bare by the production of the gelatin relief so that it is impermeable to the photographically active rays, e. g., a solution of tyopphor black in a mixture of benzene and methanol, and the gelatin relief is removed from the support by hydrogen peroxide, dilute caustic soda solution, a solution of thiocyanate, hypochlorite solution, papayotin or the like, the latter four reagents being applied at about 40° C.

Automatic Camera Aperture. W. F. Richardson. *U. S. Patent* No. 2,046,926 (July 7, 1936). A photo-engraving camera is provided with an automatic aperture unit which is governed in contraction or expansion in direct proportion to the camera extension. The aperture is rectangular in shape for contrast work, such as halftones for newspaper work.

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Gevaert Co. of America, Inc., The, 423 W. 55th St.,
New York, N. Y.
Haloid Co., The, 6 Haloid St., Rochester, N. Y.
Hammer Dry Plate Co., Ohio Ave. & Miami St., St.
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Norman-Willeys Co., 318 W. Washington St.,
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Polygraphic Company of America, Inc., 310 E. 45th
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Chillicothe Paper Co., The, Chillicothe, Ohio
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Crocker-McElwain Co., Holyoke, Mass.
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Southworth Machine Co., 30 Warren Ave., Portland,
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Lathrop Paper Co., 155 Perry St., New York, N. Y.

Linde Paper Co., J. E., 84 Beekman St., New York,
N. Y.

Marquardt & Co., Inc., 153 Spring St., New York,
N. Y.

Millar & Co., Inc., Geo., W., 284-290 Lafayette St.,
New York, N. Y.

Miller & Wright Paper Co., 200 Varick St., New
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Ink Corp., 100 Sixth Ave., New York, N. Y.

The Masking Method. T. Warmbold. *Photo-Engravers Bulletin* 26, No. 4, Nov. 1936, pp. 66-9. The early masking method of preparing highlight halftones and combination halftones used in conjunction with the modern disappearing screen and reclining copyboard provides a convenient method of procedure, a brief description of which is given.

From the Practice of Three-color Photography. R. Weizaeker. *Atelier* 43, 58, 60, March, 1936. The Bempohl one-exposure three-color camera makes use of "surface mirrors" to divide the light to the three negatives, which are placed, one at each side and one at the rear. The filters are placed immediately in front of the plates, and two sets are provided, for daylight and artificial light. Blue and red filter negatives are made on panchromatic plates, and the green negative is made on an orthochromatic plate through a yellow filter. (*Monthly Abstract Bulletin of Eastman Kodak Company* 22, pp. 417-8 (1936).)

Contact Printing by Lithographers: The Typon Papers and Films. Anonymous. *British and Colonial Printer and Stationer* 119, No. 420, Nov. 5, 1936, pp. 500, 502. The Typon "Direct" and "Reflex" processes, and the papers, films, and equipment involved are described briefly.

The Bassani Apparatus. S. L. McMichael. *Photo-Engravers Bulletin* 26, No. 4, Nov. 1936, pp. 62-4. The design, operation, and advantages of the Bassani camera are discussed briefly.

The Sterling-Groesbeck Diaphragm. H. A. Groesbeck. *Photo-Engravers Bulletin* 26, No. 4, Nov. 1936, pp. 64-6. The inventor discusses briefly the use of the de-centered diaphragm to control highlight dots in photo-engraving.

Planographic Printing Surfaces and Plate Preparation

Photoink Printing. E. N. Baker. *U. S. Patent* No. 2,058,396 (Oct. 27, 1936). A process of preparing a printing plate, comprising photographically exposing a plate having a surface of colloid containing a photo-sensitive silver salt and developing the plate to reduce the exposed silver salt, partially etching out the colloid containing reduced silver salt, thus leaving colloid on said areas, redeveloping said plate so as to reduce the remaining silver salts, and then submitting the plate to a chromate bleach bath to harden the surface thereof, whereby to form a lithographic printing plate wherein the etched portions will accept water and thus repel ink and the unetched portions will accept ink.

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New England Quartz Company of New York, 150 Nassau St., New York, N. Y.
Seibold, Inc., J. H. and G. B., 47 Watts St., New York, N. Y.
Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

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Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

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Minotti, Inc., M. A., 129 Lafayette St., New York, N. Y.
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Offset Printing Plate Co. of New York, Inc., 100 Bleecker St., New York, N. Y.
Rightmire-Berg Co., 717 S. Wells St., Chicago, Ill.
*Stockinger & Langbein Photo Litho Corp., 30 E. 21st St., New York, N. Y.

Swart-Reichel, Inc., 461 Eighth Ave., New York, N. Y.
Stevenson Photo Color Separation Co., 222 W. Fourth St., Cincinnati, Ohio

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International Printing Ink Corporation, 75 Varick St., New York, N. Y.
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National Litho Plate Co., The, 35 Meadow St., Brooklyn, N. Y.
National Offset Supply Co., St. Louis, Mo.
Photo-Litho Plate Graining Co., Inc., 1207 S. Highland St., Baltimore, Md.
Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.
Reliable Lithographic Plate Co., Inc., 17 Vandewater St., New York, N. Y.

PLATES—DRY

Eastman Kodak Company, Rochester, N. Y.
Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.
Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.
Norman-Willéts Co., 318 W. Washington St., Chicago, Ill.
Polygraphic Company of America, Inc., 310 E. 45th St., New York, N. Y.

PLATES—ZINC, COPPER and ALLOY (for Engravers)

Rolled Plate Metal Co., 210 Van Brunt St., Brooklyn, N. Y.

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Griffiths Co., Inc., John, 145 Nassau St., New York, N. Y.
Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio
Hoe, R., & Co., Inc., 910 E. 138th St., at East River, New York, N. Y.
Miehle Printing Press & Mfg. Co., 14th St., and S. Damen Ave., Chicago, Ill.
New Era Mfg. Co., 145 Nassau St., New York, N. Y.
Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
Webendorfer-Wills Co., Inc., Mount Vernon, N. Y.
Willard Press Mfg. Co., 28 W. 23rd St., New York, N. Y.

Try These Newer Methods of Half-tone Photo-offset. M. Leeden. *Modern Lithographer and Offset Printer* 32, No. 10, Oct. 1936, pp. 231-2. The great advantages of modern dot-etching and deep-etching techniques in halftone photo-offset are discussed. Deep-etching in its earliest stages failed in some cases because the ink was not firmly attached to the shallow etched portions of the plate, because the nature of the dot transparency required was not clearly understood, or because the exposure time in printing down was allowed to vary. When these factors are controlled, the plates are of fine quality and have long life.

Printing Surfaces. Chemische Forschungsgesellschaft. *British Patent* No. 451,009 (1936). Printing surfaces for relief, intaglio, or planographic printing comprise a support, e. g., of metal to which a layer of a polyvinyl alcohol or a water-soluble product of partial etherification, esterification, or acetylation of polyvinyl alcohol, or a mixture of these, is applied. The usual coating materials, such as glues, albumens, or fish glues may be included in the layer, which may also incorporate dyes or pigments. Softening agents, e. g., glycol or glycerine, or toughening agents, e. g., a sugar, a borate, or a sulphocyanide, may be included. The support may be of zinc, copper, aluminum, or stone. Designs may be engraved in the layer by means of a stylus or by pressing a relief block into the surface to form a printing surface. Specification 420,548 is referred to.

Equipment and Materials

Duprene: Synthetic Resin-like Material is Processed for Roller and Plate-making Purposes. Anonymous. *Printing Equipment Engineer* 52, No. 6, Sept. 1936, pp. 26, 50-1. Chloroprene rubber is discussed briefly as a material for roller and plate-making purposes. It is stated to be highly resistant to deterioration by inks, oils, driers, gasoline, heat, and solvents. Rollers of the material are finding favor because they are not penetrated deeply by solvents and therefore require little and infrequent refinishing.

Paper and Ink

The Trend of Paper Testing. W. B. Campbell. *Pulp and Paper Magazine of Canada* 37, pp. 256-9 (Apr. 1936). Testing tends to develop from the type of general test where many factors are included in a way similar to that of ordinary use and become a series of tests each for specific quality factors. It is pointed out that such specific tests must omit some of the factors inherent in the more general tests. Paper testing is becoming more specific in measuring factors of importance in the use requirements, particularly for printing. The methods of testing for related properties of color, brightness, and opacity which have lately been used, are reviewed. (*Paper Trade Journal* Oct. 22, 1936, p. 269 TS).

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St., New York, N. Y.

The Extension of Paper by Adsorbed Water Vapor. G. Larocque, *Pulp and Paper Magazine of Canada* 37, pp. 199-209 (1936). The rate of expansion by moisture adsorption of newsprint and glassine papers was measured at 20 and 50% relative humidities at 25° C., both in vacuo and in air. Their relative expansion in air was considerably less than it was in vacuo, and was proportional to the air velocity. Values were obtained for the equilibrium moisture content of 20 typical papers, as well as their expansions in both machine and cross directions, in an adsorption-desorption cycle from 5 to 95% relative humidity and back. The hysteresis effects in the humidity extension of paper were examined in detail for newsprint, bond, book, and offset papers, which showed that the previous moisture history of the paper markedly influenced its subsequent humidity-extension behavior. It is suggested that strains are present in the paper as a result of the manufacturing process; these strains are released when the paper is subjected to an environment of 70% relative humidity or greater, and there is a permanent alteration in the paper dimensions, the subsequent moisture-extension behavior being then more regular than it was before. Consequently, a relatively short conditioning of paper at a high humidity (about 85-95%) should greatly reduce the likelihood of curling, wrinkling, and misregister. (*Chemical Abstracts* 30: 3640-1 (1936).)

A Study of the Flow, Dispersion, and Livering Characteristics of Pigment Pastes Made with Bodied Linseed Oils. J. Mattiello and L. T. Work. (Book.) Published as Circular No. 502 by the Scientific Section of the National Paint, Varnish, and Lacquer Association, Inc., Washington, D. C., March, 1936. 138 pages. The chemical and physical properties of linseed oils bodied in industrial quantities and conditions are given. Consistency studies of pastes made with peacock blue, zinc oxide, titanium oxide, and carbon blacks show that livering in high-viscosity oils occurs with less acidity than in low-viscosity oils. Livering is independent of the initial flow characteristics of the pastes. An accelerated test for livering consists in heating the paste at 82° C. for 72 hours. The flow characteristics and livering tendencies of pastes are shown by areas on the temperature of bodying vs. viscosity curves. From these curves, specifications for processing of linseed oil may be drawn. Moisture flocculates raw oil pastes, but improves the flow of low-viscosity bodied oil pastes. Moisture adsorbed on the pigment is more effective than that contained in the oil. Low-viscosity oil appears unable to disperse pigment agglomerates, while agglomeration occurs with gel phase of high-viscosity oils. (*Chemical Abstracts* 30: 3665 (1936).)

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Overcoming Troubles with Printing Inks. R. Sanderson. *British Printer* 48, No. 284, p. 100 (1935). A number of cases of actual failure of printing inks and the methods used for investigating the cause and remedying the defect are described. (*Chemical Abstracts* 30: 4342 (1936).)

General

Exact Reproduction by Offset. G. Thiele. *Reproduktion* 6, No. 7, July 1935, pp. 130-2; No. 8, Aug. 1935, pp. 145-7; No. 10, Oct. 1935, pp. 176-8; No. 11, Nov. 1935, pp. 193-4. The author discusses the factors affecting the faithfulness of offset reproductions. Among these factors are the colors involved and their relative positions, the presence of type matter, changes in dimensions from copy, use of bronze powders, types of paper used for the original and for the reproductions, and the humidity of the pressroom. Some special attention is devoted to color filters, multiple exposures, the selection of the retouching method, and the factors determining the proper sequence of colors in printing.

Moiré Patterns in Four-Color Printing. R. Russ. *Reproduktion* 6, No. 11, Nov. 1935, pp. 191-3. The adjustment of screen angles to avoid moiré in four-color printing is discussed. A diagram showing the author's arrangement of the colors at the proper screen angles is shown and explained.

The Planographer: the Ditto Spot Color Process. Anonymous. *National Lithographer* 43, No. 11, Nov. 1936, pp. 36, 38. The Ditto Spot Color process is a means of extraneous color application using the hectograph principle. The colors are limited in number and range. The method, applicable only to planography, is described briefly.

Air and its Value to the Printer when Properly Controlled. F. Merish. *Printing Equipment Engineer* 53, No. 1, Oct. 1936, pp. 13-4. The difficulties brought on by too high and too low relative humidities in printing plants are discussed in simple terms, and the advantages of air conditioning are cited.

Color and Light. S. T. Kantor. *National Lithographer* 43, No. 11, Nov. 1936, pp. 16, 33. A short article in which some of the basic principles of light and color are explained in non-technical language.

Miscellaneous

"True" and "Imitation" Color Gravure. Anonymous. *Deutscher Drucker* 42, No. 4, Jan. 1936, pp. 152, 154. The advantages of gravure in which the use of pigment paper is dispensed with ("imitation" color gravure) are compared with those of "true" gravure in which "true" halftones are obtained. The former avoids misregister difficulties and surpasses the best offset in depth of color. Various rulings are discussed, and dot sizes obtained by these in middle tones and highlights are tabulated.



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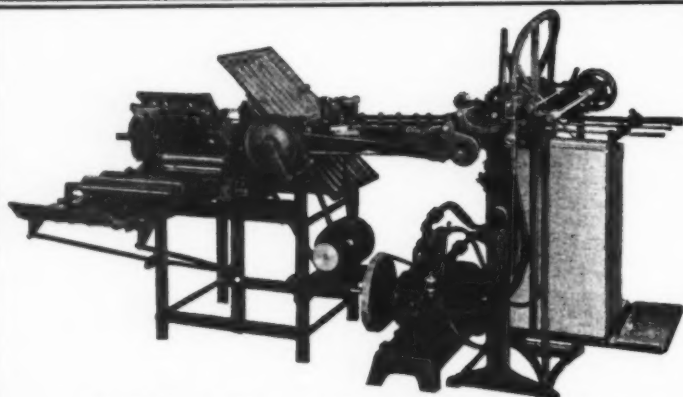
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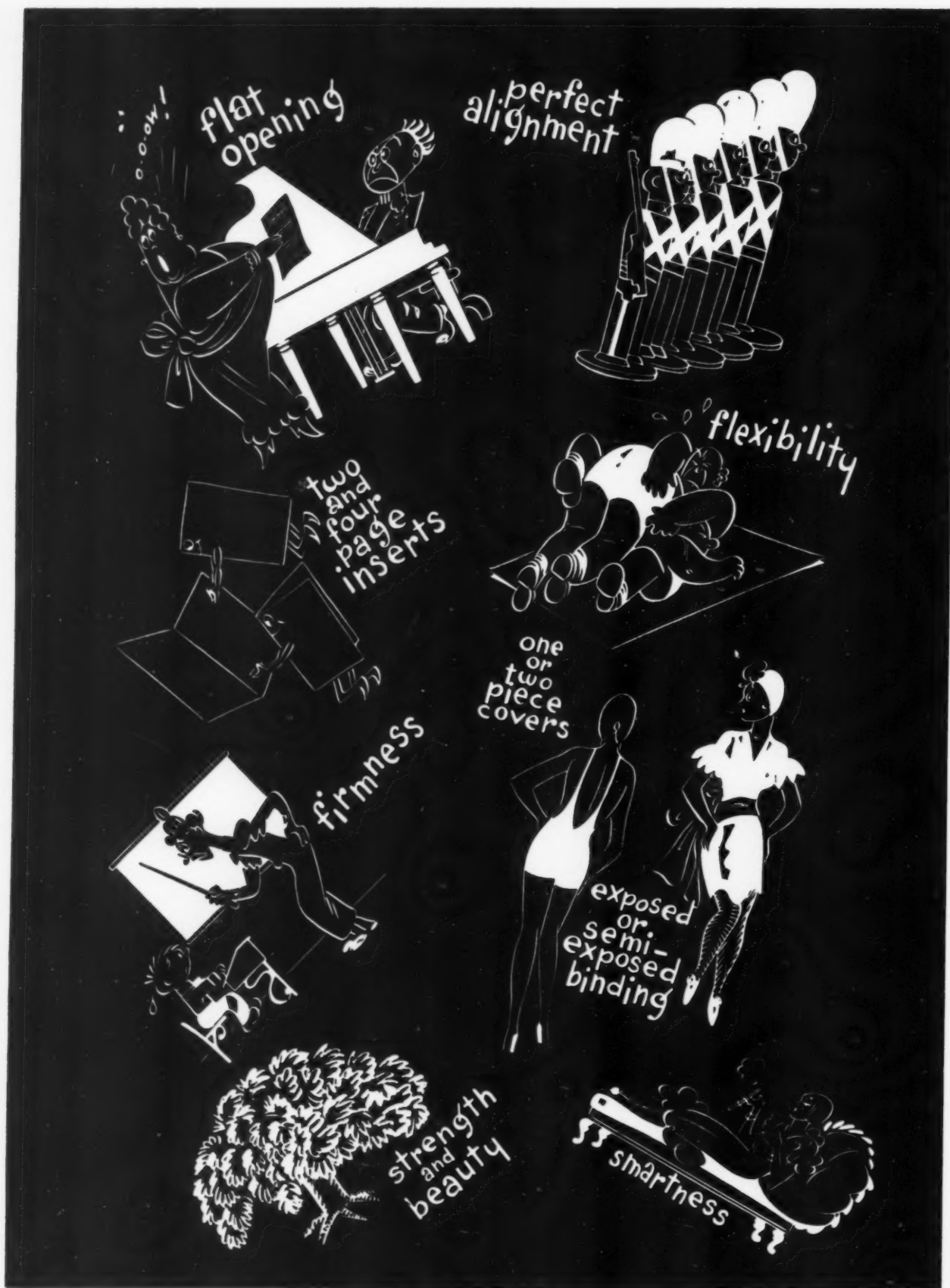
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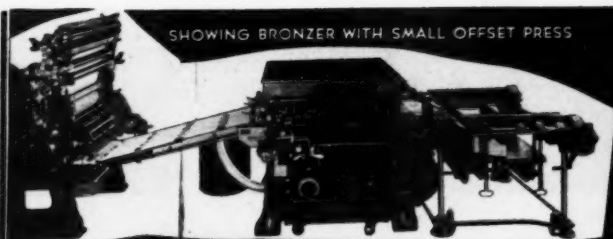
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